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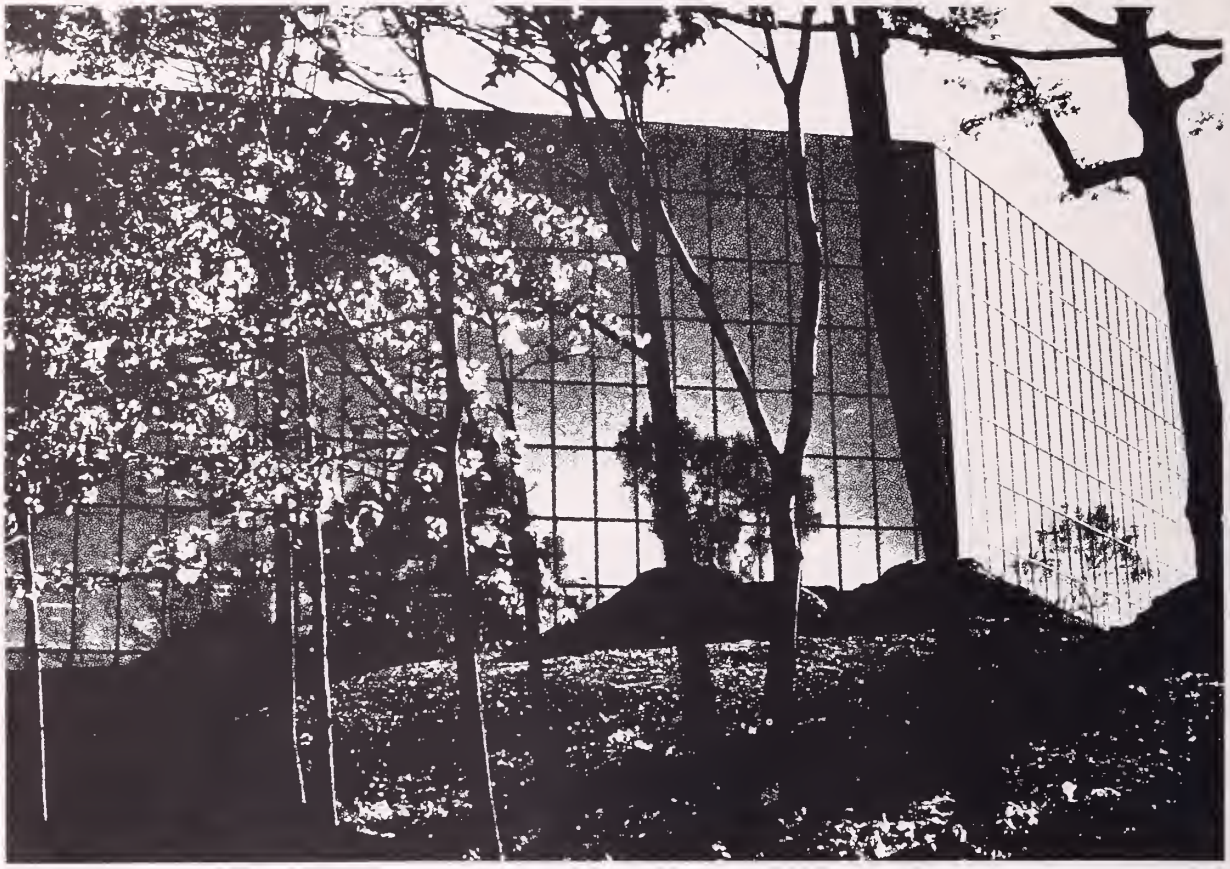
Winter scene at a West Virginia ski resort. Photo courtesy of West Virginia Department of Commerce.



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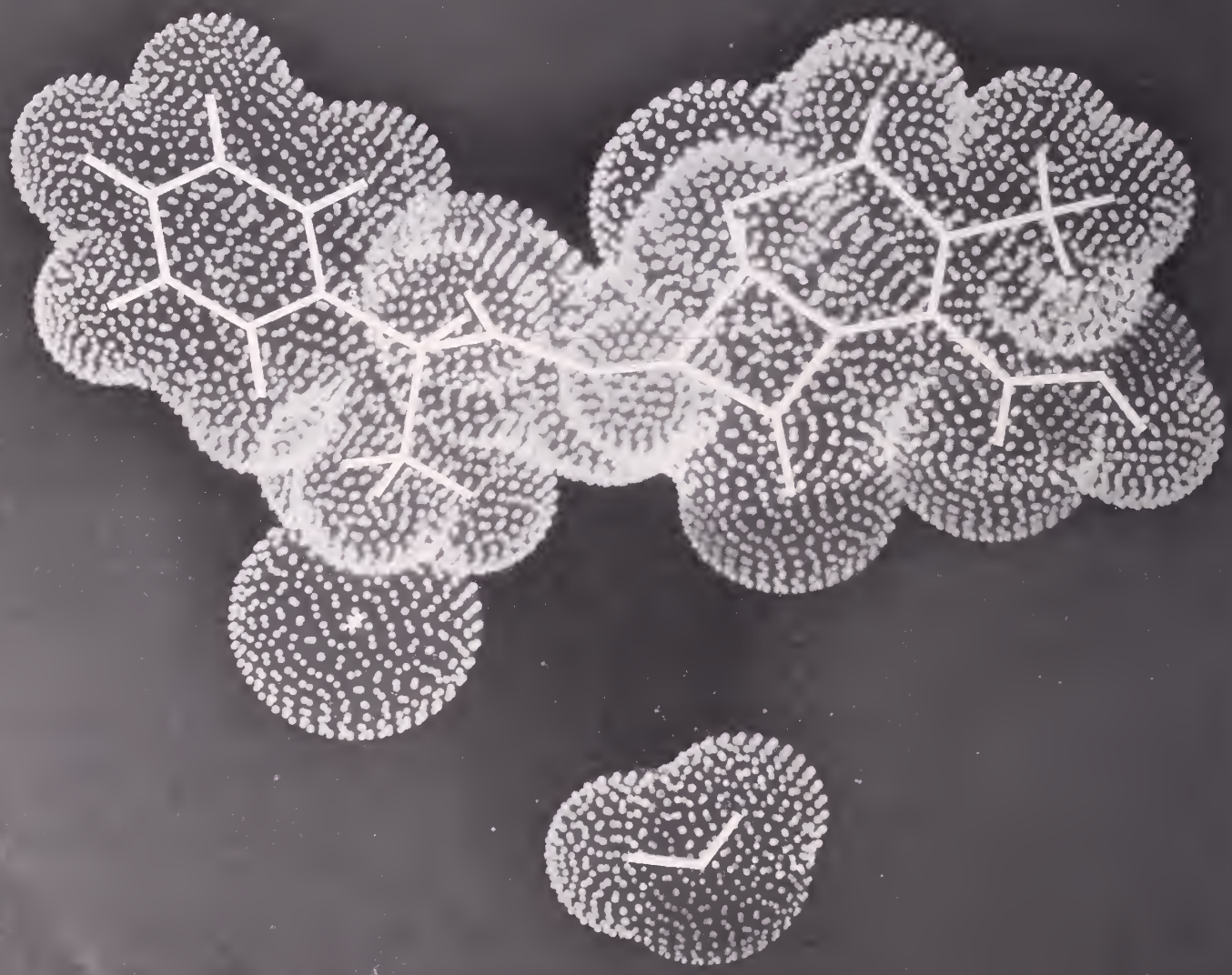

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- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
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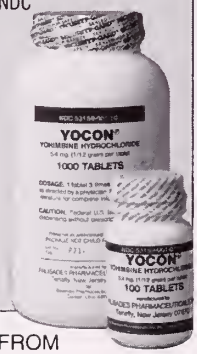

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3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
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Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

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References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
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Kawasaki Disease: An Update

MICHAEL J. LEWIS, M.D.
Associate Professor and Chairman, Department of Family Practice, West Virginia University Medical Center, Morgantown
WILLIAM A. NEAL, M.D.
Professor and Chairman, Department of Pediatrics, WVU

Initially reported in Japan, Kawasaki disease (mucocutaneous lymph node syndrome) is being recognized with increasing frequency in the United States, with several cases being reported in West Virginia. Although the etiology of this disease is unknown and therefore specific therapy is not available, early recognition and aggressive treatment have been shown to reduce morbidity and mortality. Long-term sequelae of this disease include coronary artery abnormalities, acute myocardial infarction and sudden cardiac death. Kawasaki disease has become the most common cause of acquired heart disease in childhood.

Two decades ago, Tomisaku Kawasaki, a Japanese pediatrician, reported an acute febrile illness in children which he called Mucocutaneous Lymph Node syndrome (MCLS) (1-3). He described an acute exanthematous disease characterized by persistent fever, mucous membrane hyperemia, cervical lymph node enlargement and periungual desquamation.

Clinical Features

Diagnostic criteria were established by the MCLS study group (Japan) and were based on Kawasaki's original, detailed description (1-3). They are as follows: (1) fever of five or more days; (2) bilateral conjunctival injection; (3) changes of the mucous membranes of the oral cavity including erythema, dryness and fissuring of lips; erythema of the tongue and prominence of the papillae; diffuse reddening of the oropharyngeal mucosa; (4) changes of the peripheral extremities including reddening and indurative edema of the hands and feet, and periungual desquamation; (5) polymorphous exanthem; and (6) acute nonsuppurative swelling of the cervical lymph nodes.

A positive diagnosis can be made only when a patient fulfills five of the six criteria. More than 90 per cent of patients exhibit all of the first five criteria; the sixth, lymph node enlargement, is seen in approximately 50 per cent of cases. It is most important to be aware that not all symptoms and signs are necessarily present simultaneously. Accurate diagnosis depends upon the progression of signs and symptoms over time and the exclusion of other diagnoses.

"Definitive therapy for Kawasaki disease awaits discovery of its etiology. At present, aspirin is the mainstay . . ."

Kawasaki Phases

Kawasaki disease (KD) progresses through a series of predictable clinical phases (1-6).

Acute (1-10d)—fever, conjunctival injection, oropharyngeal changes, rash, and changes in extremities.

Subacute (10-25d)—resolution of rash and fever, peeling, thrombocytosis and cardiac disease.

Convalescent (after 25d)—clearing of all signs and symptoms, until ESR and platelets become normal.

During the initial, acute phase, the patients are usually severely ill. Fever, denoting onset of the disease, begins abruptly and is characteristically remittent with spikes up to 40 degrees Centigrade several times per day. The mean duration of fever, in the absence of treatment, is 12 days with a range of four to 30 days or more. Conjunctival injection is most commonly the next manifestation, followed in variable order by other signs and symptoms.

Changes in the hands and feet are the most distinctive clinical feature of the disease during the acute phase. A purple-red discoloration appears on the palms and soles along with a firm, indurative edema of the hands and feet. The swollen areas are quite hard, unlike the soft, boggy pitting edema of toxic-shock syndrome. Usually between the tenth and fourteenth days, the skin on the hands begins to peel, starting around the nails.

Associated Features

In addition to the diagnostic criteria, other clinical features such as arthralgia/arthritis, diarrhea, photophobia, meningeal irritation and pneumonia are often present during the acute phase of the illness. Meatal inflammation, as evidenced by pyuria on clean-voided urine specimens, is a common finding. Less commonly, other manifestations such as seizures, jaundice, encephalopathy, uveitis, pleural effusions, hydrops of the gallbladder, and pancreatitis are present (1-8). The most important associated manifestations are those involving the cardiovascular system.

Laboratory Abnormalities

Although there is no specific diagnostic laboratory test for Kawasaki disease, certain laboratory findings tend to occur with high frequency and are useful in supporting or suggesting the clinical

diagnosis (1-5). Acute phase indicators such as the erythrocyte sedimentation rate, C-reactive protein, and alpha-2 globulins are consistently elevated or increased. Leukocytosis is ususally present with white counts of 20,000/ml being relatively common. The most consistent laboratory abnormality is thrombocytosis. Platelet aggregation is often increased and may remain so for several months. A mild, normochromic, normocytic anemia is common. Mild CSF pleocytosis with lymphocytic predominance is sometimes seen. Although mild liver function test abnormalities may be seen, electrolytes, BUN, and serum creatinine levels are usually normal.

Circulating immune complexes (CICs) are usually present (9). Usual connective tissue disease studies such as rheumatoid factor, antinuclear antibody and anti-DNA antibody are negative (3).

Epidemiology

Kawasaki disease has been reported worldwide in children of all races. It is markedly more common in Japan and in Japanese children in Hawaii (1-5). Sporadic cases and temporally limited community-wide epidemic outbreaks have been reported. During outbreaks in Boston and Rochester, New York, the incidence of Kawasaki syndrome increased from one and four per 100,000, respectively, to more than 150 per 100,000 during a three-month period (10). The Centers for Disease Control (CDC) have reported 10 outbreaks of the disease between August, 1984, and January, 1985 (11). Despite this somewhat convincing evidence of a common factor, no clear evidence of person-to-person spread or unique environmental exposure has been detected.

Kawasaki disease is an illness of young children with 50 per cent less than two years old and 80 per cent less than four years old. Few cases have been reported in children more than eight years old (1-5). A review of 523 confirmed cases reported to the CDC between July, 1976, through December, 1980, showed a higher incidence in males, with a male-female ratio of 1.6:1. The mean age was 2.3 years, with 66 less than one and 21 older than 11 years (8).

Etiology

The etiology and pathogenesis of Kawasaki disease remain unknown. In many ways, clinical and epidemiological data are compatible with infectious or postinfectious immunological processes. In other instances, features of the disease are suggestive of reactions to toxins.

Although considerable effort has been devoted to finding an infective agent associated with KD, thus far none has been isolated. Routine aerobic and anaerobic bacterial cultures of blood, urine, feces, CSF, pericardial fluid, lymph node aspirate, respiratory secretions, and post-mortem tissues have been negative or have yielded normal flora. Serological testing for evidence of numerous bacteria and viruses has been unrewarding (1-5,12,13). In 1973, Hamashima et al. reported the detection of rickettsia-like bodies by electron microscopy in biopsy specimens from eight patients (14). An organism was not recovered, and efforts to duplicate Hamashima's results have not been successful.

"The most consistent laboratory abnormality is thrombocytosis."

Pathology

Pathologically, KD is a multisystem vasculitis in which there is predilection for the coronary arteries (15). No significant differences have been found pathologically between infantile periarteritis nodosa and Kawasaki's disease (16).

Cardiac Involvement

The most important associated manifestations are those involving the cardiovascular system. Approximately one third of all Kawasaki disease patients show clinical evidence of carditis with pericardial effusion CHF, valvular dysfunction, or arrhythmias. Cardiac signs such as gallop, shock and arrhythmias may appear as early as the first week of illness (1-5,17,18). Studies from many centers have shown that approximately 20 per cent will develop coronary artery aneurysms, usually between days 10 and 30. The highest percentage of aneurysms occurs in males and infants less than one year of age (19-25). By far the majority of aneurysms occur proximally in the coronary arteries. Such aneurysms can be detected by two-dimensional echocardiography with relatively high sensitivity and specificity (26,27). Many studies have shown significant regression of most aneurysms with time while other studies have shown persistence of aneurysms (25,28-30). Angiographic and pathological studies confirm the development of stenotic lesions in the coronary arteries of Kawasaki patients (15,29,31), some of which may be progressive (28-32).

Immunology

The rash, fever, vasculitis, arthritis, and other features of Kawasaki disease are suggestive of a hypersensitivity or immunologically mediated process. The histopathology of KD is indistinguishable from that of infantile periarteritis nodosa, a rare collagen vascular disease (16). Circulating immune complexes, frequently found in Kawasaki disease, have been implicated in the pathogenesis of collagen vascular diseases such as systemic lupus erythematosus and in chronic glomerulonephritis. Immune complexes have also been associated with tissue injury in a variety of infections and non-infectious states.

Complement studies have shown C 3 to be elevated in weeks one to three of illness with subsequent return to normal. C 4 generally remains normal throughout the illness (33). The finding of CICs, in the absence of complement consumption, indicates that the pathophysiology of Kawasaki disease is different from that of classic immune complex disorders in which there is complement consumption and generally renal involvement.

Immunoglobulin studies have shown an acute rise and convalescent fall in all major fractions during the first eight weeks of illness (33). Whether this represents a primary response to an inciting agent or nonspecific polyclonal activation, remains unclear.

T-lymphocyte studies have shown significant abnormalities (34). Suppressor T-cells are generally significantly depressed early in the course of Kawasaki disease. This leads to an increase in the ratio of Helper T-cells/Suppressor T-cells. Therefore, T-lymphocytes from Kawasaki disease patients stimulate normal control B-cells to produce immunoglobulins and, hence, elevated antibody levels. The transient presence of CICs may be a result of this process.

Treatment of Kawasaki Disease

Definitive therapy for Kawasaki disease awaits discovery of its etiology. At present, aspirin is the mainstay of therapy (35-37). Aspirin is an attractive therapeutic agent for its anti-inflammatory properties and its role in decreasing platelet aggregation. When given in anti-inflammatory doses of 100mg/kg/day, the duration of fever is often reduced by two or three days, and coronary artery involvement appears to be reduced (36). When the fever subsides, and while platelets are elevated, aspirin is given in a dose of 5-10mg/kg/day. The lower dose of aspirin has no significant anti-inflammatory effect, but appears to be useful in decreasing platelet aggregation without stimulating vascular thrombogenic factors. Corticosteroids have been shown to increase the rate of coronary artery aneurysm formation (37). Several patients have required coronary artery by-pass surgery (38).

The most promising new development in KD therapy is the use of intravenous gamma globulin. Although controlled double-blind studies have as yet not been reported, high-dose intravenous gamma globulin, especially when given early, has been shown to reduce fever rapidly and markedly improve laboratory indicators of acute inflammation. More importantly, however, this regimen has been shown to reduce significantly the incidence of coronary artery aneurysms (39-41). Although the mechanism by which gamma globulin produces these improvements is not known, most investigators have postulated an "immune regulatory" type effect (42).

Discussion

Although specific therapy for Kawasaki disease awaits discovery of its etiology and pathogenesis, considerable progress has been made. Improved understanding of the course of the disease and optimal therapy have resulted in a decrease in the earlier reported mortality of from one to two per cent to 0.5 per cent in most recently reported series (1-5,8,24).

"Although approximately 85 per cent of all deaths occur between day 10 and day 40 of illness, myocardial infarction has been reported months or years after the onset of illness."

Despite this encouraging progress, there remains reason for concern with this illness. While initial studies on the fate of coronary artery aneurysms showed that more than one half resolved spontaneously within one year, subsequent studies have shown a high persistence rate of aneurysms and an alarmingly high rate of stenotic coronary lesions and acute myocardial infarction (29,32). Although approximately 85 per cent of all deaths occur between day 10 and day 40 of illness, myocardial infarction has been reported months or years after the onset of illness (43-46). Kato recently reported on the clinical analysis from 195 cases of myocardial infarction in Kawasaki disease (43). Although the infarction occurred during the first year in most cases, 27 per cent occurred after one year. Two cases have been reported recently in which myocardial infarction occurred 14 years after the acute illness (47-48). Suzuki reported on coronary angiography of 1,100 patients with Kawasaki disease (32). Of these, 262 patients were found to have coronary artery lesions, including 97 with coronary occlusion or stenosis. Virtually all of the stenotic lesions were found at either the inlet or outlet of an aneurysm. Pathological studies of coronary arteries from fatal cases have demonstrated that aneurysms often "heal" by marked proliferation of the intima and formation of stenotic lesions (30,31,43). This is of particular concern to the clinician following such patients by echocardiography since the "regression" of the aneurysm may give a false sense of security. Calcification, fissuring, and hyaline degeneration histologically similar to early atherosclerotic lesions have been reported (15,49). Several patients have been found to have coronary artery calcification detected on chest X-ray two to three years after the acute illness (28,44).

Recently, cases of "incomplete Kawasaki disease" with coronary artery lesions and sudden death have been described (50). In each case, the most common clinical setting was that of an acutely ill child with an unexplained high fever, followed by desquamation of the peripheral extremities. There is some evidence that very young children are less likely to meet all of the diagnostic criteria for Kawasaki disease (51). These cases suggest that any child with prolonged unexplained fever, especially when followed by desquamation, should have early evaluation for possible cardiac disease.

While older children with coronary disease may present with typical ischemic symptoms such as chest pain, this is not usually the case in the younger child. In many cases the younger child may present with abdominal pain and vomiting during an actual infarction. The first signs of heart disease in many children have been life-threatening arrhythmias, cardiac arrest or shock (45).

With angiographic evidence of progression of coronary disease and with the alarming incidence of late myocardial infarction and sudden death, it now must be recom-

mended that patients with Kawasaki disease have long-term followup. While most patients can be followed safely by non-invasive methods such as periodic physical examinations, exercise stress testing and echocardiography, some patients will be candidates for coronary angiography. All physicians providing health care to children should be aware that Kawasaki disease has become the most common cause of acquired heart disease in childhood.

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Colorectal Carcinoma: Frequency Of Location

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Colorectal carcinoma has been described with a predominance of left-sided lesions for many years. More recent evidence, however, has refuted these earlier reports. Recent reports tend to show that the incidence of right-sided lesions is approaching, and may now equal, the incidence of left-sided cancers. A retrospective review of all colon carcinomas diagnosed at the Huntington Veterans Administration Medical Center during the past five years indicates that, for this patient population, left-sided carcinoma is still predominant in a very large percentage.

Introduction

Carcinoma of the colon is now the third most common cancer in the United States. Only cancer of the skin and lung occur with more frequency. Approximately 120,000 new cases are diagnosed annually. Another 57,000 patients die yearly from this disease (1). It is a disease of the elderly with a peak incidence occurring in the seventh decade. However, it also occurs with certain frequency in people aged 40 and younger, usually with such syndromes as familial polyposis.

Beginning at the turn of the century and continuing for the next 60-plus years, didactic teaching stated that colon carcinoma was common in the rectosigmoid region and infrequent in the right colon. With the advent of fiberoptic technology, colonoscopy has become a tremendous adjunct in diagnosis of lesions located in the proximal large bowel. Right-sided lesions are diagnosed with greater frequency, and all lesions theoretically may be found at an earlier stage. Beginning in the mid 1960s and continuing into 1987, a wave of literature now suggests that the incidence of right-sided lesions is catching up to, and possibly now equals, the incidence of left-sided cancers (2-7). "Fifty years ago, 75 per cent of colorectal cancers were within reach of the examining finger or sigmoidoscope, and only about 20 per cent were in the cecum or ascending colon. There has been a gradual shift proximally, so that now only about 35 per cent are within reach of the rigid sigmoidoscope, and 35 per cent are in the cecum and ascending colon." (1)

This quote has an important, unstated implication: the increasing frequency of right-sided lesions is not due solely to better diagnostic procedures. It is the general feeling of a large portion of the medical community that the actual numbers of right-sided lesions are increasing while there is a concomitant decline in the left-sided lesions. If we take the numbers previously presented as being accurate, then of the 120,000 new cases of colon cancer diagnosed in 1987, 42,000 will be cecal or ascending colon origin, 42,000 will be rectosigmoid, and 36,000 will occur in the flexures, transverse and descending colons.

With this information as our baseline knowledge, we undertook a retrospective review of all colon cancers diagnosed at the Huntington

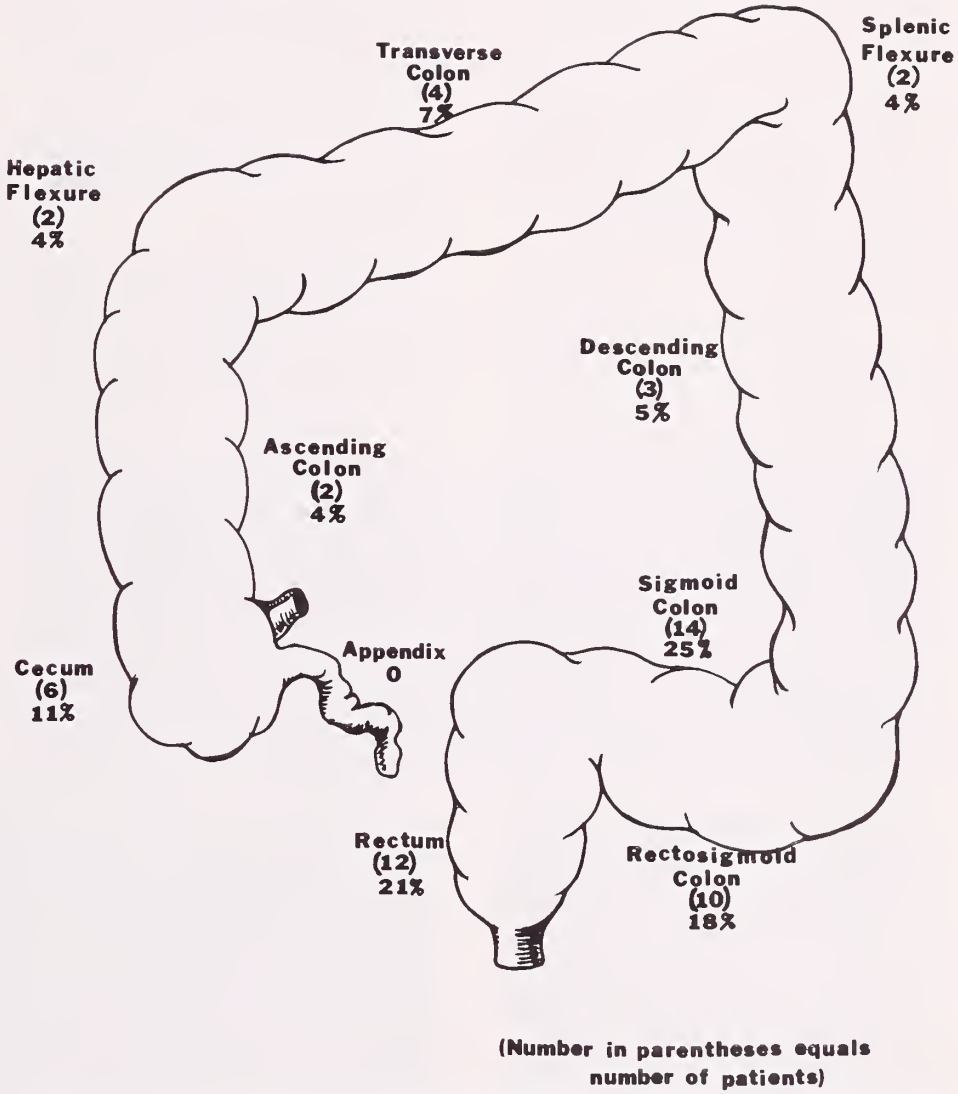

Figure. Number of patients with each primary colon site, representing 55 cases diagnosed in five years.

Veteran's Administration Medical Center over a five-year period (1981-1985). Though small in size, our results differ significantly from recent trends, and may have implications concerning the environment, dietary habits and gene pool of this population base.

Methods and Results

For the period covering January 1, 1981, to December 31, 1985, 55 cases of colon cancer were diagnosed at the VA Medical Center, Huntington, West Virginia. All cases were reviewed retrospectively. Data obtained included patient age, signs and symptoms, Duke's classification, lesion location, diagnostic workup and followup for survival.

Diagnosis was made by either sigmoidoscopy or colonoscopy in 44 of 55 (80 per cent) of the patients. Diagnosis was made with barium enema in the remaining 20 per cent of patients. Fifty-three of the patients had surgery for cure or for palliation. Two patients refused surgical therapy. Forty-nine of the surgical patients had elective surgery while four had to have emergency surgery to relieve obstruction.

Duke's classification was determined in the 53 surgical patients. Table 1 shows the breakdown of these patients according to Duke's classification. Of the Duke's D lesions, 11 of 19 patients (58 per cent) had metastases exclusively in the liver. One had metastasized or directly spread to the ureter. Table 2 shows the overall breakdown of metastatic disease.

The location of the cancers is demonstrated in the Figure. Correlated with lesion location is Duke's classification in Table 1. It is interesting to note that all of the class A lesions were located in the rectosigmoid region. It is also of note that the vast majority of the lesions (69 per cent) were stage C or D when found.

Table 3 correlates Duke's classification with patient signs and symptoms at the time of diagnosis. Grouped under "Change in Bowel Habits" is both diarrhea and constipation. Table 4 correlates lesion location with signs and symptom. "Colon Lesions" include all of the colon except the rectosigmoid lesions (35 per cent of all cases). Rectosigmoidal lesions make up 65 per cent of all lesions in this study. Table 5 reveals survival statistics based upon Duke's classification.

Discussion

Much has been made recently about the changing location of colon carcinoma in regards to frequency of occurrence. Our study, though small, is significant because it does not reflect this trend. These results concur more with the previous teaching of "75 per cent of lesions are within reach of the examing finger or sigmoidoscope." With fully 65 per cent of this group having left-sided lesions, our results appear to be "outdated." However, there have been reports during this period of revolution with which this data is quite compatible. Falterman reported a series review similar to this which stated that 71 per cent of all carcinoma of the colon was rectosigmoid in location, while only 17 per cent of the lesions were located in the ascending colon or cecum (8). One might surmise that those silent, right-sided lesions have been missed, but, almost 90 per cent of this population had the diagnosis made by endoscopy. The surgical service at this VA Medical Center has a very active endoscopic program, and routinely adheres to guidelines for screening as suggested by the American Cancer Society.

Some interesting details should be pointed out regarding signs and symptoms in this patient population (Tables 3 and 4). The majority of these patients, including those with Type A lesions, gave a history of a change in bowel habits or rectal bleeding. Very few were totally asymptomatic. Anemia as a screening factor was not very sensitive. Pain and weight loss became increasingly significant with the higher grade lesions. It is also of note that none of the type A or B lesions (16 in number) gave a history of weight loss. However, in the high-grade lesions, those numbers approach and exceed 50 per cent in both categories.

Table 4 demonstrates results very similar to published results correlating lesion location with signs and symptoms (9). Forth-seven per cent of the rectosigmoid cancer

TABLE 1
Duke's Classification*

(# of patients)	*Cecum/Ascending Colon*	*Transverse/ Descending Colon*	*Lesion Location* *Rectosigmoid*
A (5)			100% (5)
B (11)	18% (2)	27% (3)	55% (6)
C (18)	11% (2)	28% (5)	61% (11)
D (19)	21% (4)	16% (3)	63% (12)

*Total of 53 patients. Two patients refused surgical therapy and could not be staged.

TABLE 2
Site of Metastatic Disease in Duke's D Patients.

Site	*# of Patients*
Liver	14
Pelvis	2
Bone	1
Skin	1
Mesentary	1
Lung	2
Ureter	1

TABLE 3
Duke's Classification.

Signs and Symptoms	*A (5)*	*B (11)*	*C (18)*	*D (19)*
Change in bowel habits	40% (2)		50% (9)	58% (11)
Bleeding	60% (3)	45% (5)	44% (8)	58% (11)
Anemia	20% (1)	36% (4)	11% (2)	26% (5)
Pain			55% (10)	47% (9)
Weight loss	20% (1)	9% (1)	28% (5)	53% (10)
Palpable mass		27% (3)	50% (9)	26% (5)
Asymptomatic		18% (2)		

patients gave a history of a change in bowel habits. This is very close to Cohn's reported 43 per cent. Other significant parallels between the two studies are the bleeding for rectosigmoid lesions and weight loss for right-sided lesions.

Table 2 addresses metastatic disease. As expected, the most frequent location is the liver. Two of 19 patients had pelvic extension of their disease, one had ureteral invasion, and two had metastases to the lung. Interestingly, one patient had metastatic disease in the skin along with liver metastasis. Table 5 addresses survival. All of the stage A group survived except one patient who was 86 years old at the time of colon resection. Survival in stages B and C is fairly good, with one stage C survivor almost five years postoperative. No stage D patients lived for more than two years.

TABLE 4
Lesion Location.

Signs and Symptoms	*Colon (19)*	*Rectosigmoid (36)*
Change in bowel habits	11% (2)	47% (17)
Bleeding	26% (5)	56% (20)
Anemia	26% (5)	25% (9)
Pain	47% (9)	28% (10)
Weight loss	47% (9)	22% (8)
Palpable mass	16% (3)	39% (14)
Asymptomatic	5% (1)	3% (1)

TABLE 5

	A	*B*	*C*	*D*
Alive and Well	4/5	7/11	9/18	0/19
Range for Time Post-op	(11-55 mo.)	(13-66 mo.)	(9-56 mo.)	(Longest Survival rate)

Conclusion

Our results appear to disagree with the current national trend for colon cancer. However, there are other studies which are larger than this review which indicate that the supposed trend of increasing right-sided lesions may not necessarily be accurate. It also raises questions about the various population bases across the country. There may not be a "national trend" per se, but simply isolated groups which demonstrate an incidence of increasing right-sided lesions. Certainly this does not hold true for this study group.

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Perforated Duodenal Diverticulitis

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A case report of spontaneous perforation of duodenal diverticulitis diagnosed at laparotomy, and treated by excision of the diverticulum with closure of the defect in the duodenum and drainage of the paraduodenal area. Inspection of the paraduodenal area is important in an apparently normal laparotomy in a patient with signs and symptoms of acute abdomen to exclude perforated duodenal diverticulitis.

Case Report

A 70-year-old man was admitted to the hospital in September, 1985, with a 24-hour history of sudden onset of upper abdominal pain radiating to the back with nausea and vomiting. In 1975 he had a cholecystectomy for cholelithiasis and, in 1977, had truncal vagotomy and retrocolic gastrojejunostomy for chronic duodenal ulcer.

On examination his temperature was elevated at 38.5 °C, and he was dehydrated with generalized abdominal tenderness radiating mainly to the right side of the back with guarding. The bowel sounds were hypoactive and rectal examination was normal. Full blood count showed neutrophil leucocytosis, the white cell count was 25.7 x 10^9/L, and the neutrophil 91 per cent. Abdominal and chest x-rays did not reveal any abnormalities.

A provisional clinical diagnosis of perforated anastomotic ulcer was made, although there was no free air in the peritoneal cavity, and laparotomy was carried out through a right paramedian incision. A retroperitoneal inflammatory bile stained fluid was found with abscess formation lateral to the second part of the duodenum with perforated duodenal diverticulum. A culture swab was taken and suction of the fluid and Noxythiolin washout was performed.

The second part of the duodenum was mobilized, the perforated diverticulum excised, and the defect in the duodenum closed in two layers of chromic cat gut and covered by omentum. The retroduodenal area was drained by sump suction drain for a week, and antibiotic cover was given for five days.

The histopathology report revealed, "inflammed duodenal diverticulum," and the culture swab grew E. Coli. The patient was discharged 10 days later, fully recovered and, on review a year later, was asymptomatic.

Discussion

Duodenal diverticula are not uncommon, with an incidental radiological finding of five per cent of the population (1) and 22 per cent in postmortem (2). They are usually asymptomatic and require surgery only for complications. Perforation is the most rare and serious complication. In one survey only two cases were reported in 70,000 surgical admissions to the hospital (3).

The preoperative diagnosis of perforated duodenal diverticulum is difficult because there are no pathognomonic signs or symptoms, and the diagnosis can only be made at laparotomy. The localized retroperitoneal air over the duodenal area may be of significance on abdominal x-rays as well as in the cases of abscess formation where there may be small fluid levels in the same area (4). The pathogenesis of the perforation may well be related to stasis and peptic activity within the sac.

The surgical management of choice involves mobilization of the duodenum, diverticulectomy, closure of the duodenal defect in two layers, and omentum cover and drainage of the para duodenal area (1,3,5,6).

Complementary procedures like gastrojejunostomy have been suggested in previous reports as a means of minimizing the risk of duodenal fistula in cases of severe inflammation (6), but recently parenteral nutrition is recommended if such a complication occurs (5).

In view of the difficulty in the preoperative diagnosis and the rarity of the condition, we suggest that in an apparently normal laparotomy in a patient with signs of acute abdominal inflammation, inspection of the paraduodenal area is important to exclude perforated duodenal diverticulitis.

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8½ by 11 in.) white paper. Wide margins at least 1¼ in. on left should be left free for typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

A short abstract summarizing the manuscript should be included. This should be typed in double space on a separate page.

Authors are requested to submit a copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 x 7 in. in size. Cost of printing black and white photos in excess of 4 will be billed to author, and no more than 25 references will be published free of charge to the author. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

Concerning AIDS

MICHAEL M. STUMP, M.D.
Elkins, West Virginia

AIDS is a devastating disease which poses a threat, real or imagined, to almost everyone.

First, it might be proper to acknowledge that the subject of AIDS can elicit emotions and polarizations of significant degree. The polarization that has taken place among physicians is generally in regard to the means and methods to address appropriately this unfolding epidemic. It is a subject upon which physicians and persons of good will and collegiality can disagree. All can readily agree that we have acquired a great amount of knowledge quickly and that a great deal more knowledge is yet needed.

Secondly, we, as physicians, can legitimately claim prime attention in the field of medicine on this subject. We must also recognize that expertise in medicine and health does not automatically confer expertise in all other areas. In the areas of legislation, resource allocations, priority determinations, and social purpose and goals, our legislative representatives have a broader overview of the needs and demands of their costituents than we do. They are also answerable at election time for the policies they follow and the laws that they enact.

With the above in mind, the following material is presented.

Gravity of Threat

At this time, the World Health Organization has estimated that five to 10 million persons are currently infected with the AIDS virus, and that 500,000 to three million new symptomatic AIDS cases may well be present within the next five years—a tenfold increase.

The seriousness of the worldwide epidemic of AIDS and the gravity of the threat to the United States should be fully evaluated. The threat is both to our national health and to our economic well being. It has been estimated that more than 250,000 persons will die by 1991 and that the minimum 1991 cost from direct health care and loss of productivity will be from 29 to 36 billion dollars up to a worst-case cost of in excess of 100 billion dollars.

AIDS is the first universally fatal sexually transmitted disease. It is caused by a virus recently named HIV (Human Immunodeficiency Virus) which is a member of the Lentivirus subfamily of the greater Retrovirus family.

"Since the August meeting, the AIDS epidemic has not eased nor does it give any indication of mitigating."

Part of the seriousness of the epidemic involves the ability of the HIV virus to become immediately an integral part of the DNA genetic code of some of our immune system cells by means of an enzyme called reverse transcriptase. These cells then produce additional quantities of HIV virus until the cell dies and releases the increased quantities of virus to infect other cells or becomes quiescent waiting to produce more virus later under appropriate stimulation. Stimulation or death of these immune system cells produces or releases more HIV virus which promptly infects additional cells to repeat the cycle over and over until the person dies. The death is often due to opportunistic infection secondary to immune system deficiency.

Additional concern flows from the fact that there undoubtedly will not be a vaccine in this century, if ever. Further, effective treatment is not at hand, nor is it likely in the next decade, and certainly not before a five-year period has elapsed.

Etiology

AIDS appears to have first developed in Africa possibly as a species jumping mutant of a Retrovirus infecting the Green Monkey of central Africa. AIDS was discovered in the United States in 1981, with five cases reported. It then spread quite rapidly.

The doubling time of the disease in the United States is now at 13 months. For every known AIDS case there are an estimated five to nine ARC (AIDS-Related Complex) cases and 50 to 100 HIV pos. infected carriers. Among the latter group, less than 10 per cent are even aware that they are infected and represent a significant reservoir of HIV virus. This unaware group of greater than 90 per cent of the HIV infections are infected carriers completely capable of unknowingly infecting others. The AIDS-ARC COMPLEX in more than two thirds of these current carriers will be manifested within five to seven years, and the remaining one third is expected to develop AIDS-ARC later.

Heterosexual transmission now accounts for four per cent or more of the transmission rate and may become the primary transmission mode rather quickly. Up to 20 per cent of new AIDS cases are in women. In Africa where there are few homosexual males and minimal I.V. drug users, heterosexual

transmission has always been the standard mode of transmission. In certain African areas some 10-11 per cent of the population is currently infected, and the death rate from AIDS may devastate the African people by the year 2000.

WVSMA Resolutions

At the West Virginia State Medical Association Annual Meeting in August of 1987, the resolutions concerning AIDS were openly read and distributed. All the delegates and attending physicians were invited to be present for input to the open Resolutions Committee hearings. Many physicians did attend. During the open Committee hearings and discussions, considerable attention and consideration were given concerning education, testing, and counseling. This discussion was thorough and conducted with the seriousness the gravity of the subject demanded, and with compassion for persons infected with HIV.

The Committee then met in formal session (not attended by this author) and brought forth the AIDS resolution later adopted by the House of Delegates.

Since the August meeting, the AIDS epidemic has not eased nor does it give any indication of mitigating. There are now 42,000 cumulative AIDS victims in the United States of whom more than 26,000 have died. There are an estimated 200,000 to 400,000 cases of ARC and an estimated 1.5 to 2.0 million HIV pos. infected carriers capable of transmitting the disease.

Extensive mandatory studies of 4,000,000 recruits seeking enrollment in the United States military service reveal that the average HIV infection rate among these males is 1.6/1,000 or 160/100,000. This rate is considered low because of self-selectivity in that active I. V. drug users do not enter the services nor do many active homosexual males apply. The female HIV pos. rate is one third of the male rate.

In the high-prevalence states of New York, New Jersery, Florida, Connecticut and the District of Columbia, the HIV pos. rate has been estimated at 1.2 per cent or 12/1,000 for males and 0.4 per cent or 4/1,000 for females. In low-prevalence areas the HIV pos. rate is on the order of 0.1 per cent or 1/1,000. Within five years the distribution of the infection is calculated to be more or less even, with 20 per cent of the cases being in California and New York and 80 per cent of the cases being in the rest of the nation.

In hospitals, the HIV pos. asymptomatic patient ranges from one per 100 admissions to one per 5,000 admissions, varying by a factor of 50. In Walter Reed Hospital, a pilot study was conducted with findings of a higher-than-expected rate. The unexpected rate was 3.7/1,000 versus an outpatient rate of 1.8/1,000 and a local Red Cross rate of 1.1/1,000.

Low-Prevalence Area

It has been claimed that in a low-prevalence area (1/1,000) such as ours, the false positive rate will be higher than the true positive rate. It should be noted that the United States Public Health Service (USPHS) stated August 14, 1987, that "a test for HIV antibody is considered positive when a *sequence of tests* starting with a repeatedly reactive enzyme immunoassay (EIA) and including an additional, more specific assay, such as a Western Blot, is consistently reactive." The USPHS further stated that a false positive in a population with a low rate of infection would be on the order of 1/100,000 to 5/100,000 when strict criteria are used for interpretation. Needless to say, the true positive rate of infection in a low-prevalence area of 1/1,000 is 100/100,000 or anywhere from 20 to 100 times the false positive rate.

"For every known case there are an estimated five to nine ARC (AIDS Related Complex) cases and 50 to 100 HIV pos. infected carriers."

It has been claimed that a false sense of security would develop among health care workers and physicians in relation to HIV negative patients. The Centers for Disease Control (CDC) published a useful table August 21, 1987, to estimate the annual number of patients infected with HIV not detected by HIV antibody testing in a hypothetical hospital with 10,000 admissions / year. The rate of non-detection in a low-prevalence area of 0.1 per cent or 1/1,000 is zero to one HIV pos. persons not detected out of a population of 11 HIV pos. infections. In other words, zero to one infected patients would be missed in 10,000 admissions in a year. If the prevalence rate were five per cent, then about 500 cases would be detected and 17 to 18 patients would be missed in 10,000 admissions. It is to be hoped that our state remains a low-prevalence area.

Predictive Value

It has been claimed that the predictive value of a positive test is inadequate to the task and its use will result in great harm. The definition of predictive value of a test refers to the probability that an individual within a defined population set has a given disease when the particular test has a certain value. The predictive value of a laboratory test depends on prevalence (the frequency of the given disease among the population set being tested), sensitivity (the percentage of true positive results in patients with the given disease), and specificity (the percentage of true negative results in healthy patients). Again, the PHS and CDC state that the sensitivity of the currently licensed EIA tests is 99 per cent or greater, and the specificity approximately 99 per cent when *repeatedly reactive* tests are considered.

They further note that the sensitivity of the licensed Western Blot test is comparable to that of the EIA, and is highly specific when strict criteria are used for interpretation. The CDC further demonstrates by table that the predictive value of a positive test is 99.75 per cent in a low-prevalence area of 0.2 per cent or 2/1,000. If the prevalence grew to 20 per cent or 200/1,000, then

the predictive value would improve by only 0.24 per cent to 99.9 per cent predictive value.

It has been claimed that premarital blood testing for AIDS will not be productive and will not be cost effective. This may be true if such a test is considered as an isolated event and not as a part of a greater program, and if one attaches no importance to the purpose of requiring premarital blood testing for any disease. One of the main purposes of a license to marry is to protect both spouses from sexually transmitted infectious diseases and to assist in the protection of their unborn children from transmissible infectious diseases. It should be noted that from 30 to 50 per cent of HIV-infected mothers will transmit HIV to their child.

Again, the PHS in August clearly stated, regarding persons planning marriage, that "Premarital testing in an area with a prevalence of HIV infection as low as 0.1 per cent (1/1,000) may be justified if reaching an infected person through testing can prevent subsequent transmission to the spouse or prevent pregnancy in a woman who is infected."

Diagnostic Tool

The PHS further stated: (1) "Testing for HIV antibody is a useful diagnostic tool for evaluation of patients with selected clinical signs and symptoms such as generalizied lymphadenopathy, unexplained dementia, chronic unexplained fever or diarrhea, unexplained weight loss, or diseases such as tuberculosis as well as sexually transmitted diseases, generalized herpes, and chronic candidiasis"; (2) Hospitals, in conjunction with state and local health departments, should determine periodically the prevalence of HIV infections in the age groups at highest risk for infection, with consideration given to routine testing in those age groups; and (3) Partners of HIV pos. persons should be notified, by the public health department if necessary, and counseled and tested.

The PHS has previously stated, "The more the HIV infection is disseminated throughout the population before future control measures begin, the harder it will be to bring it under control."

'Routine' vs. 'Mandatory'

Many persons prefer the term "routine," and have objected to the term "mandatory." Certainly there is a difference in definitions between the words "mandatory" and "routine," and our emotional response to these two words, of course, is different. Many don't like mandatory "anything" since they view it as coercion. Yet many things are mandated in our lives, and this is precisely how the test is done in many instances. It is mandated by the FDA that blood for transfusion will, among other things, be tested for HIV pos. antibody. A blood donor has no choice but to be tested if he desires to donate. The test is not an option—it is routine and it is mandatory and it is proper. It has reduced the chance of getting AIDS from a blood transfusion to one in 64,000 or less. It is mandated by law that immigrants be tested, that military recruits be tested, and that several other categories of people undergo mandatory testing.

"Again, the PHS and CDC state that the sensitivity of the currently licensed EIA tests is 99 per cent or greater, and the specificity approximately 99 per cent when repeatedly reactive tests are considered."

It would be great injustice to West Virginia physicians if the resolutions passed by the State Medical Association would be misconstrued to suggest that physicians were putting their interests before those of patients. Nothing could be further from the truth. The goal is to help people—help those who have the infection and help prevent its spread to those who do not yet have the infection. The WVSMA acted in the best interests of all of their patients and all West Virginians.

Universal Precautions

To suggest that universal blood and body fluid precautions remove all risk from the health care worker is incorrect. Careful hygienic techniques will help if followed, although the loss of productivity will be inordinately costly if the techniques are used with every patient in the manner recommended. Health care workers will always remain at enhanced risk even following correct procedure. The risk is very small but very real. Other health care workers may be at greater risk than physicians, who are expected to have knowledge concerning their patients that the health care worker is not privy to. Our fellow health care workers are entitled to our geatest consideration and protection.

This author is not aware of any physicians who have said they would not take care of an AIDS or HIV pos. patient, although many have said they would like to know if a patient is HIV positive. More careful techniques could be followed in known HIV pos. cases, thus reducing the likelihood of transmission.It is a part of a physician's creed that appropriate confidentiality will be maintained in regard to all tests and confidential findings.

Identifying Infected Patients

To suggest that nothing can be done for the patient who has HIV infection is to think only in terms of life and death. The HIV patient can be helped to construct and fashion a support network, advised to avoid those situations and actions which could result in increased morbidity, counseled concerning those behaviors that could endanger himself and those he loves, and be assisted in and advised of those treatments that could enhance the quality and length of his life. These steps are of significant value but of scant help if the patients are unaware of their HIV pos. status. As pointed out, more than 90 per cent of those infected with HIV don't know it.

The control of infectious disease, and especially sexually transmitted disease, in the United States involves:

- health education
- disease and/or infection detection
- appropriate treatment where possible
- contact tracing and patient counseling
- clinical services
- training and research

Under the subheading of disease and/or infection detection as it applies to any infectious disease testing including HIV testing, it is understood that the reasons, justifications, and purposes of HIV testing are:

- identification of infected persons
- treatment where possible
- education and counseling to help modify behavior
- to prolong life and well-being
- to protect uninfected third parties
- to locate and refer sex partners and contacts
- to gain knowledge of prevalence of HIV infection in the populations tested

"We need to mobilize, coordinate and integrate educational, testing, and counseling resources as best we can."

With the understanding that AIDS is categorized as a sexually transmitted disease and that sexual expression springs from exceptionally strong, basic, and even primeval, urges, it seems self-evident that education without testing is at best, inefficient, that counseling without testing is ineffective, and that testing without education and counseling is inefficient, ineffective and uncompassionate.

Education and counseling teach behavioral modifications in patients and motivates to reduce spread of disease and to begin to build a supportive network of help and assistance for those who test positive. Testing reinforces and puts teeth into the educational and counseling program. Only by doing all of these together do we say we really mean business regarding AIDS.

We cannot afford to delay, procrastinate or put off addressing the problem of AIDS in a meaningful way with whatever resources we now have at hand. We need to mobilize, coordinate and integrate educational, testing, and counseling resources as best we can.

The State Medical Association is addressing these urgent concerns to the West Virginia Legislature. We trust the Legislature will take appropriate action to help control this epidemic while giving consideration to our economic resources and individual rights.

Richard C. Rashid, M.D.

Muhib S. Tarakji, M.D.

Herbert A. Tipler, M.D.

G. Geoffrey Miller, M.D.

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President's Page

"The answer to this whole dilemma . . . is to make available affordable health care to low-income Medicare beneficiaries and to seriously consider the issue of waivers of Medicare deductibles and co-payment in cases of financial hardships."

A Sad Day In Medicine

It was a sad day for Medicine when Massachusetts Law Chapter 475 of 1985 was promulgated. This law requires that as a condition for licensure a physician who treats a Medicare patient shall not charge or collect any fee other than that determined by the United States Secretary of Health and Human Services. This law, as we understand it, applies even if the patient and the physician agree on a reasonable fee, and neither the patient nor the physician may apply to the government for reimbursements.

This law clearly violates the American sense of fair play and freedom of contract. It is a coercion that has no place in our land of Liberty. It is furthermore an unwarranted intrusion into the doctor-patient relationship and definitely is an impediment to the accessibility of quality care. In addition, it is a violation of the traditional principles of the licensure process that exist in the States of the Union.

Because of this restriction of freedom in the State of Massachusetts, referred to by many as the Cradle of Liberty, it is now being nicknamed by many as the People's Republic of Massachusetts. I believe it will have a devastating outcome as physicians there have concluded it is not a good place to practice medicine. In fact, it is being labeled as a "bad place to practice medicine."

Expressions of sympathy have come from many other states for Massachusetts to the floor of the AMA House of Delegates, ranging from requesting a moment of silence to encourage symbolic memorial services, to declaring a national day of mourning to dramatize this pernicious law to the press and to the public for this loss of right to contract.

The Massachusetts scenario is spreading to other states. Every possible effort must be mobilized to prevent any extension or duplication of this travesty.

We must make the public aware that physicians traditionally have demonstrated a high level of sensitivity in providing needed care to the poor, and that we have been responsive to the need to accept the Medicare amount of payment in full for financially disadvantaged Medicare patients. The answer to this whole dilemma, in my opinion, and in the opinion of many others, is to make available affordable health care to low-income Medicare beneficiaries and to seriously consider the issue of waivers of Medicare deductibles and co-payment in cases of financial hardship. A form of voluntary Medicare assignment program may very well be the answer. Many such programs have been initiated in local county societies in the states of Connecticut, Idaho, Oklahoma, Ohio, and Wisconsin, to name a few.

Your leadership presently is making a study of these programs and will be attempting to meet with local medical societies and local senior citizen organizations to develop a cooperative effort to deal with this dilemma. We need the cooperation of all of our membership in dealing with this problem and in preserving our liberty and freedom to practice medicine the best way we know how.

I wish you all a Happy New Year!

—Cordell A. De La Pena, M.D.

AIDS Concerns

On page 665 appears an article, CONCERNING AIDS, by Michael M. Stump, a member of the Council of the West Virginia State Medical Association. Doctor Stump is a pathologist from Elkins, West Virginia and, as the article will attest, very knowledgeable on the subject of AIDS.

Early in the article he acknowledges the controversial nature of any attempted discussion of the subject, even among physicians. Perhaps this is as it should be, particularly on a subject about which we have still so much to learn.

What we do not know about the disease and even its prevalence in West Virginia is the crux of concern by the West Virginia State Medical Association. Doctor Stump makes reference to the Resolutions passed at the Annual Meeting of the Association in August, 1987. The aim of the various sponsors of the Resolutions was to gather information on the subject and to increase knowledge about the vagaries of the disease in order that others need not be unknowingly and needlessly infected by this deadly plague.

The West Virginia State Medical Association cannot responsibly advocate less than this. The details of how these aims might be accomplished deserve thorough discussion. The worthiness of the goal of providing protection for any who could be needlessly exposed is beyond disputing or even discussion.

It has come to our atention that some physicians who have advocated this position of the State Medical Association have been subjected to calumnious campaigns directed at them and at their motives in promoting the goals above described. Charges of "homophobia" have been made by individuals and groups of advocates, apparently otherwise disposed, in an effort to mute discussion or create questions about the character of anyone with opposing opinions or orientations. In one case, at least, these efforts have extended so far as to recommend professional boycott.

We expect that the subject of AIDS and its control will have a complete airing before committees of the West Virginia Legislature. We expect too that those testifying in favor of information-gathering and case-finding goals will become targets of similar abuse. Legislators too can expect to be made to feel threatened politically if they dare appear favorable to legislation implementing these goals.

The State Medical Association is prepared to provide testimony at any hearing and to vigorously promote its views. We hope the discussion will not deteriorate into name-calling hysteria. The subject is much too important for that.

We once again commend to you Doctor Stump's well-reasoned, informative and very timely article—CONCERNING AIDS.—SDW

33 Per Cent Awake

Hats off to you—the West Virginia State Medical Association! Your WESPAC support has been at an all-time high in 1987. Thirty-three per cent of your membership—566 members— contributes to WESPAC. This is the highest in our PAC history.

WESPAC membership provides a dual membership with AMPAC, the AMA political action committee. Membership contributions are shared with AMPAC. WESPAC contributes to state elections, and AMPAC contributes to congressional candidates and campaigns.

We are facing in 1988 an election year, and as some say, "As this election goes, so goes the practice of medicine." With your help the body of the House, Senate, even the Supreme Court, can be changed. WESPAC contributions are used *only* for candidate support.

Solutions to many of the problems and concerns Medicine faces require access to policy-makers. Access is gained by working on campaigns, contributing to candidates, staying informed on the issues, and expressing Medicine's views.

WESPAC/AMPAC were established for the principal purpose of encouraging members of the medical community and their spouses to take an active part in the political process. WESPAC is committed to helping West Virginia physicians and their spouses get the best value for their political contributions. WESPAC-endorsed candidates in the 1986 election won 85 per cent of the seats in the West Virginia Legislature. Membership in WESPAC serves as a unified voice for West Virginia physicians.

Please be aware that the WESPAC Boad is appointed by the Council of WVSMA. This year for the first time due to bylaws changes, each county society will be asked to name one

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member to serve on a WESPAC candidate selection committee. Since supporting the best, and most receptive, candidate is our goal, we need to hear from each county society as to who in their district will be the candidate most likely to listen, and act favorably, on medical issues.

WESPAC, the West Virginia Medical Political Action Committee, is the unified voice of organized medicine in West Virginia. A regular membership is $50; a sustaining membership, $100 or more. A personal check (corporations cannot contribute to political action committees) made payable to WESPAC and mailed to WESPAC, P.O. Box 4106, Charleston, WV 25364 is all you need to do to become a member. PLease join! The next step is for you to get to know your legislators. Reinforce the PAC contributions by talking with them, letting them know where you stand on the issues.

Last August at the Annual Meeting at the Greenbrier in my annual report to the House of Delegates I called WVSMA "a sleepling giant, waiting to be awakened politically." Congratulations—thirty-three per cent of you are awake to the value of PAC membership. Let's try for 100 per cent in '88! It *does* make a difference.

P.S.: Don't forget, your spouse can, and should, be a member of WESPAC too.

—Guest Editorial by Esther H. Weeks, Wheeling, Co-Chairman, WESPAC

Our Readers Speak

Medicare Payments For Physician Services

Editors Note: The following letter was addressed to WVSMA President Cordell A. De La Pena, M.D., and Charles E. Turner, M.D., Chairman of the WVSMA Council.

I sincerely appreciate your lengthy and informative letter regarding a number of issues of current concern that relate to Medicare's payment policies for physician services. I respect your views and found your points to be helpful when we consider some of the specific issues you mentioned in the deliberations on the budget reconciliation bill.

As I'm sure you have heard, the Finance Committee ultimately agreed to a full MEI of 3.6 per cent for *primary* services and an MEI of one per cent for the remainder of physician services. This, of course, falls short of the adjustment sought by you and your colleagues, and I fully recognize that you have a strong case for a more generous provision. The problem, however, is that we had to curb Medicare spending significantly as part of the crucial effort to reduce the deficit. With the pace of medical inflation and the fact that the Administration and some of their supporters in Congress actually want reductions in physician payments, we simply had to limit federal spending in this area. We are even facing the prospects of a budget agreement that instructs the Finance Committee to find additional savings in Medicare.

I was part of an effort to try to address the special problems of rural areas in the reconciliation process to the extent possible. I also took your recommendations seriously, and hope you agree that we rejected some of the more negative changes or measures that the Administration has pushed Congress to approve.

Again, you have valid and constructive points about physicians and their need to obtain adequate reimbursement from Medicare. I sincerely hope that the Relative Value System will result in positive reforms that will be to the benefit of your profession, the citizens of West Virginia, and medical care in general. I am glad to have a seat on a committee that enables me to contribute to this objective.

I send my best regards to both of you and to the State Medical Association. Thank you very much again for writing.

John D. Rockefeller IV
United States Senate
Washington, DC 20510

Timely Medical Topics Package Offered By '88 'Mid-Winter'

AIDS, Hypertension, Diet, Breast Surgery

Ohio and New York physicians will join two state doctors to present papers for the concluding Sunday morning, January 24, session of the 21st Mid-Winter Clinical Conference.

A "potpourri" of timely medical subjects will be discussed during the session, with the general title being "Practical Information on Hypertension, Insulin Therapy, Coronary Heart Disease, and Breast Reconstruction."

The Conference, again sponsored by WVSMA and West Virginia University and Marshall University schools of medicine, will be held January 22-24 at the Holiday Inn Charleston House in Charleston.

"The Program Committee has worked hard to put together a very exciting and relevant program paying particular attention to a factual presentation of the problems of AIDS to the primary care physician," said Dr. William O. McMillan, Jr., of Charleston, Chairman.

Donald G. Vidt, M.D., Chairman of the Department of Hypertension and Nephrology at the Cleveland Clinic Foundation, will be the first Sunday morning speaker, the Program Committee announced. His subject will be "The Role of New Agents in the Treatment of Hypertension."

Other Sunday speakers and topics announced were Robert E. Olson, M.D., Professor of Medicine, State University of New York at Stony Brook, "Diet, Red Meat and the Risk of Coronary Heart Disease;"

and David C. Fogarty, D.D.S., M.D., Clinical Associate Professor of Medicine, Department of Surgery, Division of Plastic Surgery, WVU School of Medicine, Morgantown, "Breast Reconstruction Post Mastectomy."

Donald Armstrong, M.D.

Donald G. Vidt, M.D.

Richard E. Kleinmann, M.D., as announced previously, also will speak Sunday on "Insulin Therapy: Update." Doctor Kleinmann is Associate Professor of Medicine, Section of Endocrinology and Metabolism, Department of Medicine, WVU Charleston Division.

Speaker Replacement

The Program Committee also said that Dr. Donald Armstrong of New York City will speak in the place of Dr. John G. Bartlett, a previously announced speaker for the Saturday morning session on "AIDS." Doctor Armstrong, Chief of Infectious Diseases, Memorial Sloan Kettering Cancer Center, and Professor of Medicine, Cornell University Medical College, New York City, will discuss "Treatment of AIDS and Its Complications."

Scientific sessions for the annual CME event will be held Friday afternoon, January 22; Saturday morning and afternoon, and Sunday morning. WVSMA President Cordell A. De La Pena, M.D., of Clarksburg will present remarks at the 2 P.M. opening session Friday.

A physicians' session on "Practice Management" (see separate story in this issue of *The Journal*) will be held Friday evening along with a concurrent public session on "AIDS."

The conference has been approved for 13 hours of Category 1 CME credit by MU, and for 15.25 Prescribed Hours by the American Academy of Family Physicians.

AIDS Research Posts

Doctor Armstrong is a member of the Scientific Advisory Committee, American Foundation for AIDS Research, and was 1986 Chairman of the Opportunistic Infection Subcommittee, AIDS Treatment Evaluation Unit Steering Committee, National Institutes of Health. He also

was a member of the NIH AIDS Clinical Drug Development Committee in that year.

He was a member of the Organizing Committee, Fourth International Symposium on Infections in the Immunocompromised Host in Sweden in 1986, and was on the International Advisory Committee, International Conference on AIDS, France, also in 1986.

Doctor Armstrong also is Director of the Microbiology Laboratory, Department of Medicine, and Chief, Infectious Disease Service, Department of Medicine, at Memorial Hospital in New York City.

Born in Montclair, New Jersey, he was graduated from Lehigh University, and received his M.D. degree in 1957 from the College of Physicians and Surgeons, Columbia University, New York City.

He interned at Bellevue Hospital in New York City and served his residency in medicine at the University of Colorado, Denver General Hospital and Colorado General Hospital, and at Memorial Hospital in New York where he was Chief Medical Resident.

Cleveland Post Since 1964

Doctor Vidt has been on the staff of the Cleveland Clinic Foundation since 1964. He has produced, co-produced or served as narrator for six films and four videotapes on hypertension and dialysis.

He is Chairman of the Committee on Hypertension of the American College of Chest Physicians, and a past President of the American Society for Clinical Pharmacology and Therapeutics.

He also served as Vice Chairman of the Program Committee for the 1983 conference of the National Committee on High Blood Pressure Education, Chairman of the Committee's Working Group on Renovascular Hypertension in 1985, and is a member of the Advisory Committee to the Minority Hypertension, Detection and Control Project, Greater Cleveland High Blood Pressure Coalition.

Doctor Vidt served on the Advisory Committee for the AMA Committee on Current Procedural Terminology (CPT-4) in 1986.

Born in Newark, New Jersey, Doctor Vidt was graduated from

Robert E. Olson, M.D., Ph.D.

Seton Hall University, earned a master of science degree from Ohio State University, and received his M.D. degree in 1959 from Ohio State. He interned and completed residencies in medicine and renal disease at University Hospitals in Cleveland, and was a United States Public Health Service Fellow in Metabolism and Renal Diseases at Cleveland Metropolitan General Hospital in 1963-64.

He is the editor of two books and author or co-author of 157 scientific articles.

Other SUNY Appointments

Doctor Olson's other appointments at State University of New York at Stony Brook include those as Professor of Pharmacology Sciences, Director of Environmental Sciences Center, and Director, Cardiovascular Research Center.

He has held a number of editorial appointments including those as Editor of *Annual Review of Nutrition* and Editor of *Nutrition Reviews,* and served as President of the American Institute of Nutrition in 1981-82.

Doctor Olson has published a total of 208 papers in peer-reviewed journals and 59 chapters in books or major reviews on subjects including experimental and clinical nutrition, cardiac metabolism, and the biochemistry of isoprenoid lipids.

A native of Minneapolis, he was graduated from Gustavus Adolphus College in St. Peter, Minnesota, earned a Ph.D. degree in biochemistry from St. Louis University, and received his M.D. degree in 1951 from Harvard Medical School.

Doctor Olson has been the recipient of many scholarship and other honors including Phi Beta Kappa, Fulbright Travel Award, Guggenheim (John Simon) Foundation Awards, and McCollum Award, American Society of Clinical Nutrition.

Dental, Medical Degrees

Doctor Fogarty has been in the private practice of plastic and reconstructive surgery in Morgantown since 1980 and, in addition to his clinical plastic surgery appointment at WVU, also is Clinical Associate Professor of Oral Surgery.

He was born in Waterbury, Conneticut, received his secondary education in Morgantown, and was graduated in 1964 from WVU where he also received his D.D.S. degree (1968) and M.D. degree (1973).

Doctor Fogarty interned and took his residency in general and plastic surgery at Stanford University Medical Center in Palo Alto, California.

Other surgical residencies include: a six-month hand fellowship in Louisville, Kentucky; a three-month burn unit fellowship at the Santa Clara (California) Valley Hospital; three months in Honduras in general plastic surgery; multiple visits to Mexico, Honduras and Ecuador as a volunteer INTERPLAST surgeon; fellowship in the Department of Head and Neck Surgery, Roswell Park Hospital, Buffalo, New York; and medical mission trips to Lesotho, Botswana and Ghana, Africa.

Previously Announced Speakers

Speakers and topics announced previously are:

Friday Afternoon ("Dermatology for the Primary Care Physician")—"Manifestations of Collagen Diseases," Charles L. Yarbrough, M.D., MU Clinical Assistant Professor of Medicine and Pathology;

"Cutaneous Manifestations of Internal Malignancies," Robert B. Point, M.D., Kings Mountain, North Carolina, Clinical Professor of Medicine, Section of Dermatology, WVU Charleston Division;

and "Diagnosis and Treatment of Primary Skin Malignancies," Stephen K. Milroy, M.D., Clinical Assistant Professor, Section of Dermatology, Department of Medicine, WVU Charleston Division.

Saturday Morning ("Acquired Immune Deficiency Syndrome (AIDS)")—(in addition to Doctor Armstrong) "Retroviruses: A Primer for Clinicians," Robert B. Belshe, M.D., MU Professor of Medicine;

"The Epidemiology and Prevention of Human Immunodeficiency Virus Infection," Richard S. Hopkins, M.D., Assistant Professor, Department of Preventive Medicine, Ohio State University;

and "AIDS: Its Effect on Blood Transfusion Practice," Mabel M. Stevenson, M.D., Director, Tri-State Red Cross Blood Services, Huntington, and Clinical Professor of Pathology, MU.

Saturday Afternoon ("Update: Pulmonary Disease")—"Drug Therapy in COPD," Nicholas J. Gross, M.D., Chief, Department of Medicine, Hines (Illinois) Veterans Administration Medical Center, and Professor, Department of Medicine, Loyola University of Chicago;

"Newer Concepts in Bronchospastic Disease," N. Leroy Lapp, M.D., Professor and Acting Chief, Pulmonary Disease Section, WVU Department of Medicine, Morgantown;

and "Pre-operative Evaluation of the Pulmonary Patient," Nancy J. Munn, M.D., Associate Professor of Medicine and Chief, Section of Pulmonary Diseases, Department of Medicine, MU.

Public Session

The Friday evening public session will be a panel discussion on "AIDS." Discussants will be Drs. Richard S. Hopkins (also moderator), Assistant professor, Department of Preventive Medicine, Ohio State University College of Medicine; Fred T. Kerns, Assistant Clinical Professor, Section of Infectious Diseases, Department of Medicine, WVU Charleston Division; Robert B. Belshe, Professor of Medicine and Microbiology, Department of Medicine, MU; and Mabel M. Stevenson, Director, Tri-State Red Cross Blood Services, Huntington, and Clinical Professor of Pathology, MU.

Program Committee

Members of the Program Committee in addition to Doctor McMillan are Drs. Maurice A. Mufson, Huntington; Joseph T. Skaggs, Charleston; Richard G. Starr, Beckley; John W. Traubert, Morgantown, and C. Carl Tully, South Charleston.

Other Meetings During Conference

Other meetings and events scheduled in conjunction with the 21st Mid-Winter Clinical Conference January 22-24 in Charleston are:

Friday, January 22

Continuing Medical Education in West Virginia, 9 A.M. (WVSMA Committee on Medical Education and Hospitals to hold breakfast meeting at 7:30 A.M., Dr. William O. McMillan, Jr., presiding), Holiday Inn Charleston House

West Virginia Young Physicians business meeting, 1 P.M., Dr. Stephen L. Sebert, presiding, Holiday Inn Charleston House

West Virginia Psychiatric Association, 5 P.M., Dr. Larry C. Smith, presiding, Holiday Inn Charleston House. Guest Speaker: Jeffrey A. Coffman, M.D., Assistant Professor of Psychiatry, Ohio State University. Subject: "AIDS: Clinical Psychiatry"

Saturday, January 23

Component/Specialty Society Presidents and Chiefs-of-Staff/Medical Staff Presidents, Noon luncheon meeting, Dr. Cordell A. De La Pena, presiding, Ernie's Esquire Restaurant

West Virginia Chapter, American College of Physicians, Noon Luncheon and business meeting, William O. McMillan, Jr., presiding, Holiday Inn Charleston House

West Virginia Academy of Ophthalmology membership luncheon, Noon, Robert K. Scott III, M.D., President, presiding, Holiday Inn Charleston House. Speaker: T. Michael York, M.D., Assistant Professor of Ophthalmology, WVU School of Medicine, Morgantown. Subject: "Treatment of Diabetic Retinopathy"

Reception, 6:30 P.M., Holiday Inn Charleston House. Hosts: WVU School of Medicine, Richard A. DeVaul, M.D., Dean, presiding; and WVU Alumni Association, Richard H. Sibley, M.D., President, presiding

WESPAC Dinner-Dance, 7:30 P.M., Esther Weeks, presiding, Holiday Inn Charleston House

Sunday, January 24

WVSMA Cancer Committee breakfast meeting, 7:30 A.M., Holiday Inn Charleston House. Catalino B. Mendoza, Jr., M.D., presiding

Cancer Liaison Physicians, Noon, luncheon meeting, Holiday Inn Charleston House. Eric Mantz, M.D., presiding

Mid-Winter Clinical Conference

How To Get Paid Physicians' Topic

Practical tips on maximizing reimbursements will be the thrust of the Physicians' Session of the 21st Mid-Winter Clinical Conference Friday, January 22, at 8 P.M. at the Holiday Inn Charleston House in Charleston.

"What Every Physician Needs to Know About Getting Paid" is the title of the program to be presented by Karen A. Zupko, President of KarenZupko and Associates in Chicago.

The program is designed to provide physicians a thorough understanding of insurance coding—a good grounding in the fundamentals of CPT and ICD-9 coding as well as the system needed to support a successful insurance filing effort.

Miss Zupko will discuss how to:

- know when coding does and does not affect reimbursement (with illustrative, "how-to" examples)
- keep the players straight—CPT, ICD-9, DRGs and HCPCS
- decipher the design of the CPT Book and how to make it work for you including the punctuation, index, and guidelines sections of CPT
- design office communication forms and tracking systems
- use Modifiers: what they can and can't do

Karen Zupko brings more than a dozen years of experience to her lectures, writing and consulting assignments. Prior to opening her consulting firm, Miss Zupko directed the American Medical Association's Department of Practice Management and established a national reputation as an authority on practice management and marketing.

Over 100,000 physicians and medical office personnel nationally have attended programs featuring Miss Zupko. Her credits include appearances on national specialty society programs as well as at conferences for hospitals and other medical associations.

She has been recognized by the American Society of Association Executives as "Educator of the Year"

Karen A. Zupko

for her contributions to continuing medical education. The American Society of Plastic and Reconstructive Surgeons named her "Outstanding Faculty Member" of the Practice Management Symposium in 1981.

Miss Zupko is featured in Video Journal and in the American Educational Institute's videotape series which is offered nationally in over 50 locations.

Her articles have appeared in Medical Economics, Hospital Physician, Physician Management, and Physician's Financial News. She also has authored an issue of Urology Grands, contributes a monthly column to several specialty society journals, and serves on the editorial boards of Physician's Marketing and Solutions newsletters and as an advisor to Hospitals Magazine.

Recently, Miss Zupko completed a 100-page guide on "Starting Your Plastic Surgery Practice" and co-authored a manual on marketing for dermatologic surgeons.

She holds memberships in the American Marketing Association and Women in Communications.

A graduate of the University of Kansas, she is a Chicago native.

Poetry Corner

Exit / Entrance

Hey, old man
You've done all you can
Here.
Why don't you let go?
Is it fear?
You never were afraid before
To open any door
Not knowing what was on the
other side.

It's not fear, but love.
When one abides
On Mother Earth
As long as I,
He grows to love her
And those who are here — or were;
Ah, there's the key—
All those I loved
Who in turn loved me
Are gone... I should join them;
Maybe tonight, we'll see.

Robert L. Smith, M.D.
Morgantown

Anticipation of the Nostalgic-Future

Now go through, quickly, through clouded streets, and make haste to the lee.

The night's near spent, the orb near-woke, the mist half-g'on the moon.

Sea foaming clouds of nearing lights, the vessel's almost nigh; amidst slapping waves, faint-chanting beard, so near to thy abode.

The form'ng hull, the slippr-ing decks, the frost upon thy breath.

The wailing-singing on thy ears, the pounding of the breast.

Far closer now than half thy life, since parted.....their boat is home anew.

Francis H. Oliver, M.D.
Morgantown

We request physician contributions to Poetry Corner.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine for part of 1988, as compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Robert E. Kristofco, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Kristofco, (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

Marshall University

Jan. 16-17, Huntington, Conscious Sedation (lectures)

Feb. 13-14, Huntington, Conscious Sedations (ACLS)

Mar. 19-20, Huntington, Conscious Sedations (hands on seminar)

West Virginia University

Feb. 6-7, Issues & Controversies in Gastroenterology & Nutrition, Canaan Valley Ski Resort

Feb. 21-24, Snowshoe Rheumatology Conference, Snowshoe

Mar. 18-19, Living With Cancer

CAMC/West Virginia University, Charleston Division

Feb. 8-10, Snowshoe, 7th Annual Cardiovascular Symposium

Mar. 18-19, AIDS Symposium

Mar. 25, Annual Newborn Day

Mar. 30, Research Day

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center Morgantown

Brownsville, PA, Brownsville General Hospital, 1st and 4th Thursday, 11 A. M. to 1 P. M.—Jan. 7, "Polypharmacy Problems in the Elderly," Charles D. Ponte, R.Ph., Pharm.D.

Jan. 28, "Comparison of New Antiarrhythmic Drugs," Stanley Schmidt, M.D.

Fairmont, Fairmont Clinic, 3rd Wednesday, 12:30 P. M. — Jan. 20, "Cystic Fibrosis," Henry L. Abrons, M.D.

Martinsburg, City Hospital, Special Lectures/Grand Rounds—January (No Program)

Martinsburg, V.A. Medical Center, 1st Thursday, 2 P. M. — Jan. 7 (No Program)

New Martinsville, Wetzel County Hospital, 2nd Thursday, 12-1 P. M. — Jan. 14, "Rheumatoid Arthritis—Management Concepts," Maryann Antonelli, M.D.

Philippi, Broaddus Hospital, 2nd Thursday, 7-8 P.M.—Jan. 14, "Pulmonary Embolism—Current Evaluation & Treatment," Thomas Covey, M.D.

Uniontown, PA, Uniontown Hospital, Special Lectures—Jan. (No Program)

Waynesburg, PA, Greene County Memorial Hospital, 2nd and 4th Tuesday, 7-9 P. M. — Jan. 12, "Review of Newer Antibiotics," Rashida Khakoo, M.D.

Jan. 26, "Autoimmune Disease," Maryann Antonelli, M.D.

Wheeling, Ohio Valley Medical Center, 2nd Wednesday, 8-9 A.M.—Jan. 13, "Renal Tubular Acidosis," Jean Holley, M.D.

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center-Charleston Division/CAMC

Beckley, Southern W. Va. Clinic, 4th Thursday, 5:30 to 7:30 P. M. — Jan. 28 (program tba)

Feb. 25 "Organic Brain Syndrome," Sidney Lerfeld, M.D.

Cabin Creek, Cabin Creek, Medical Center, Dawes, 2nd Thursday, 8-10 A. M. — Jan. 14 (holiday)

Gassaway, Braxton Co. Memorial Hospital, 1st Wednesday, 7-9 P. M. Jan. 6 (holiday)

Greenbrier, Library, Greenbrier Clinic, 3rd Tuesday, 4-5 P. M. — Jan. 19 (holiday)

Madison, Boone Memorial Hospital Conference Room, 2nd Tuesday, 7-9 P. M. — Jan. 12 (holiday)

Oak Hill, Plateau Medical Center (Oyler Exit, N 19) 4th Tuesday, 7-9 P. M. — Jan. 26 (holiday)

Summersville, Summersville Memorial Hospital, 1st Tuesday, 6:30-8:30 P. M. — Jan. 5 (holiday)

Welch, Stevens Clinic Hospital, 3rd Wednesday, 12 Noon-2 P. M. — Jan. 20 (holiday)

Whitesville, Raleigh-Boone Medical Center, 4th Wednesday, 11 A. M.-1 P. M. — Jan. 27 (holiday)

Williamson, Williamson Memorial Hospital, 1st Thursday, 6:30-8:30 P. M. — Jan. 7 (holiday)

Interpretation Caution Urged

The Joint Commission on Accreditation of Healthcare Organizations urges caution in the interpretation of mortality data released in December by the Health Care Financing Administration (HCFA).

"Both government and the private sector are aggressively seeking and developing better ways to evaluate and monitor the quality of health care. However, the release of these data, which have no established relationship to quality, is a negative distraction with little redeeming value," stated Dennis O'Leary, M.D., President of the Joint Commission.

"It is apparent from our intense developmental work to date that clinical indicators can be identified which are more sensitive than the type of information to be released by HCFA. Of interest, only 16 per cent of the indicators now being refined by the Joint Commission relate to patient deaths; in each instance, these mortality indicators are more precisely defined than the HCFA data.

Former WVSMA Treasurer Dies

Dr. Kenneth G. MacDonald, Sr., of Charleston, former long-time WVSMA Treasurer, died November 26 in a hospital there after a short illness. He was 72.

A retired general surgeon, "Dr. Mac," beginning in 1965, was elected to 15 one-year, uninterrupted terms as Treasurer. He was succeeded by Dr. George A. Shawkey of Charleston in 1980.

After closing his private practice in 1984, he served on the staff of West Virginia University School of Medicine, Charleston Division where he was Clinical Professor Emeritus of Surgery.

At the 1980 WVSMA Annual Meeting, the House of Delegates adopted a resolution praising Doctor MacDonald for his "lengthy tenure as Treasurer as well as for his outstanding service to the medical profession."

He served as past President of the West Virginia Chapter of the American College of Surgeons; past President and Vice President of the Kanawha Medical Society, and was a former member of many state and local medical committees including the WVSMA Medical Scholarships Committee for many years.

Doctor MacDonald was a former part-time Medical Consultant for the West Virginia Workers' Compensation Fund.

W&L, Cornell Graduate

Born in Chester, Pennsylvania, he was graduated from Washington & Lee University, and received his M.D degree in 1940 from Cornell University Medical College. He served his internship and residency at Lenox Hill Hospital in New York City, and did postgraduate work in surgical pathology at New York University before coming to Charleston in 1948. He was a recipient of the Phi Beta Kappa Key, and was elected to Alpha Omega Alpha and Phi Chi medical fraternities.

Doctor MacDonald was a Fellow of the American College of Surgeons, a Diplomate of the American Board of Surgery, and a past President of the West Virginia Chapter of the American College of Surgeons.

He was active for many years in the Boy Scouts of America, and received the Silver Beaver Award, the highest award given to adult leaders. A member of the Baptist Temple of Charleston, other community activities included past President of the American Business Club, past Commander and Chief, Great Kanawha River Navy; member, Executive Board, Charleston Boat Club; member, Board of Governors, Southern West Virginia Automobile Association and past President of the Charleston Chapter of AAA; Flotilla Commander and past Division Commander of the United States Coast Guard Auxiliary, and member, Robert E. Lee Associates of Washington and Lee University, a group established to assure financial support for that institution.

Kenneth G. MacDonald, M.D.

Doctor MacDonald served with the U.S. Army during World War II, being assigned to Gen. George S. Patton's 12th Evacuation Hospital as surgeon with the rank of Captain.

He was an honorary and retired member of the Kanawha Medical Society, WVSMA and American Medical Association.

Survivors include the wife, Mrs. Ellen MacDonald; a daughter, Jeanne MacDonald of Charleston; two sons, Frank MacDonald of Charleston and Dr. Kenneth G. MacDonald, Jr., of Greenville, North Carolina; and a sister, Elspeth MacDonald of Birmingham, Alabama.

GI-Nutrition Course In February

"Issues and Controversies in Gastroenterology and Nutrition," a continuing medical education course, will be held February 6-7 at Canaan Valley Lodge.

Sponsors are the West Virginia Gastrointestinal Society and the CME Office at West Virginia University School of Medicine.

The course is designed to update internists, gastroenterologists, family practitioners, and surgeons in selected areas of gastroenterology and liver disease.

Topics will include advances in the diagnosis and management of patients with gastrointestinal hemorrhage, and issues in ischemic bowel diseases. A special series of lectures on issues in nutrition will be presented.

Guest faculty will include Drs. Firas Al-Kawas, Associate Professor of Medicine, Georgetown University, and Chief, GI Endoscopy Unit, Veterans Administration Medical Center, Washington, DC, a former WVU faculty member; and Scott Jones, Chairman of Surgery, University of Virginia. They will be joined by eight regular and clinical faculty from WVU and Marshall University.

The CME offering is accredited for seven credit hours in Category 1.

Quality CME Goal Of Meeting

A meeting for state continuing medical education providers Friday morning, January 22, will precede the opening that afternoon of the 21st Mid-Winter Clinical Conference in Charleston.

The program, "Continuing Medical Education in West Virginia," will be held at the Holiday Inn Charleston House, also the site of the clinical conference.

The meeting goal is to help participants plan quality CME programs, and is being supported, in part, by an educational grant from The Upjohn Company.

Sponsors are WVSMA and the CME Offices at Charleston Area Medical Center, Marshall University

and West Virginia University schools of medicine.

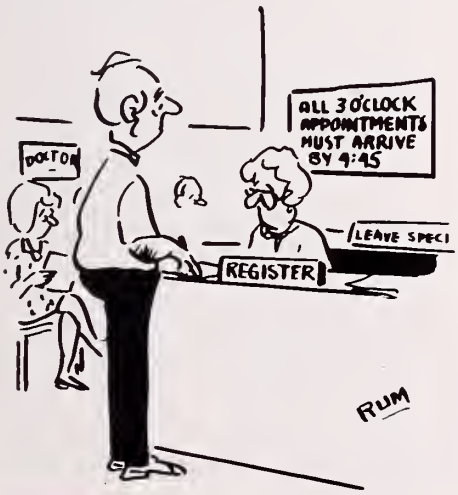
The sponsors are urging attendance by directors of medical education and their assistants at West Virginia hospitals and institutions/organizations which have been accredited as CME providers through WVSMA, and those which plan to apply for accreditation. Also attending will be members of WVSMA's Committee on Medical Education and Hospitals, which reviews for approval state CME programs seeking accreditation by the Accreditation Council for Continuing Medical Education (ACCME) through WVSMA. Committee members also serve as surveyors on local site surveys of CME programs requesting accreditation.

Guest speakers will include Frances M. Maitland, Assistant Secretary, ACCME, Lake Bluff, Illinois; and David Lichtenauer, Medical Science Liaison, The Upjohn Company.

Other speakers will be Mary W. Hamilton, WVSMA Executive Assistant and CME Accreditation Coordinator, and Sharon Hall, Ernest Chick, M. D., and Robert E. Kristofco, CME Directors, respectively, for CAMC, MU and WVU.

The program will be preceded by a breakfast meeting of the WVSMA Committee at 7:30 A.M., with the full conference beginning at 9 A.M.

The enrollment fee is $10, which covers refreshment break and lunch. The meeting will end at 1:30 in time for the 2 P. M. opening of the Mid-Winter Conference. (See also story in the December issue of *The Journal.)*



Practical Tips For Presentations

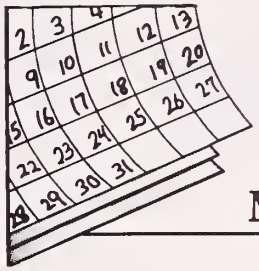
A successful scientific presentation requires thorough knowledge, conciseness, clarity, organization, and correct use of slide projection. The following are suggested tips to a well-presented paper:

1. Choose topic of your expertise and of interest for a particular audience.
2. State the purpose of your paper clearly in one sentence.
3. Give a brief introduction or reference to the evolvement of your topic.
4. Outline concisely your materials and methods i.e., number of cases, sex, ages, social history, technique, etc.
5. Present clearly results, complications, advantages, limitations, etc.
6. Summarize in one sentence outcome or importance of your paper.
7. Stop, thank the audience, and sit down quietly.

Common Pitfalls to Avoid:

1. Don't try to tell everything you know about your topic; you are bound to run overtime. Stick to your main theme.
2. Don't read your presentation from a manuscript or your slides; you should know it by heart.
3. Don't deliver multi-long statements; rely on your slides as cues.
4. Don't fill your slides with sentences, long references, and voluminous data; use only key words and short data.
5. Don't make slides out of textbooks or journals unless of absolute value to your topic's contents.
6. Don't get overly humorous—it's not a comedy show, but do inject wit or guips relevant to your topic.
7. Don't look at the screen all the time (side glance only); face your audience.
8. Don't use bad slides, i.e., dark, unreadable, blurred, poorly mounted, etc.
9. Don't forget to acknowledge or address the moderator, program director, special guest or faculty member, and the audience.
10. Don't go beyond your alloted time, for you should "do unto others as you would like others to do unto you."

—Romeo Y. Lim, M. D., Charleston



Medical Meetings

January

22—CME in WV, Charleston

22-24—21st Mid-Winter Clinical Conference, Charleston.

31—Feb. 3—Southeastern Surgical Congress, Orlando, Fla.

February

1-3—Southeastern Surgical Coinference, Lake Buena Vista, Fla.

17-21—Am. College of Psychiatrists, Tucson.

27—N. Am. Trauma Assoc., Snowmass Village, Colo.

March

2-6—Physicians for Social Responsibility, Washington, D.C.

20-23—Am. Society of Abdominal Surgeons, Williamsburg, VA.

23-26—Am. Burn Assoc., Seattle.

24-27—Am. Medical Student Assoc., Washington, D.C.

25-27—WV Urological Society Spring Seminar, Charleston.

27-31—Am. College of Cardiology, Atlanta.

April

15-17—WV Chapter, AAFP, Huntington.

18-20—Am. Assoc. for Thoracic Surgery, Los Angeles.

24-27—WV Academy of Ophthalmology, 41st Annual National Spring Meeting, White Sulphur Springs.

May

1-5—Am. College of Obstetricians & Gynecologists, Boston.

5-7—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

27-30—WV Academy of Otolaryngology, Head & Neck Surgery, White Sulphur Springs.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

WVU Medical Center News

West Virginia University

Compiled from material furnished by the Medical Center News Service, Morgantown, W. Va.

Doctor Gutmann On Journal Board

Dr. Ludwig Gutmann, Professor and Chairman of Neurology, has been appointed to the Editorial Board of "Muscle & Nerve," an international journal in the field of neurology. The monthly publication is devoted to clinical and basic research into neuromuscular diseases.

Doctor Gutmann, who is also Professor of Psysiology and Biophysics, is Director of the Medical Center's electromyography laboratory.

He is a Director of the American Board of Psychiatry and Neurology, a board member of the Myasthenia Gravis Foundation, Chairman of the Intersociety Committee on Neurologic Resources for the American Academy of Neurology, and immediate past President of the Association of University Professors of Neurology.

Doctor Gutmann's publications and abstracts number more than 125, with half a dozen currently in press. He came to WVU's medical faculty in 1966 after completing a neurophysiology fellowship at Mayo Clinic.

Smoking Cessation Clinic Started

If you enjoy smoking just to relax, or on social occasions, it may be easy for you to quit.

If, however, you feel you need a cigarette within one half hour after you wake up in the morning, you're probably more heavily addicted to nicotine, according to the National Cancer Institute.

The NCI defines a heavy smoker as one who consumes 25 or more cigarettes a day.

For those who want to quit, there's now a clinic at WVU Medical Center ready to help.

The Smoking Cessation Clinic is part of the Department of Family Practice and is supported by the Cancer Information Service at WVU and the National Cancer Institute.

Stephen W. Pollard, a resident in the family medicine program, is one of the physicians in charge of the clinic.

"The Cancer Information Service at WVU's Mary Babb Randolph Cancer Center found that there was no specific clinic to which they could refer people in the state who want to quit smoking," he said. "There were physicians, but no clinics, so we got together with them and with the NCI and worked out a format."

The clinic's program includes five sessions: The first evaluates the patient and his or her smoking habits, while the other four include counseling and behavioral modification techniques which result in a gradual withdrawal from smoking.

Doctor Pollard said NCI has found that education and behavioral modification are among the most effective methods.

"With these types of programs, it has been found that about 50 to 60 per cent of the participants who attend all five sessions give up smoking for at least six months," he said, "and 35 per cent may give it up for longer than a year.

"We know that almost all smokers try to quit sometime during their life, and that it's easier if they have some kind of support."

He said the clinic is needed in West Virginia because there are higher rates of heart disease and cancer in the state than in most other states. Both diseases are related to smoking.

"Some 80 to 90 per cent of lung cancer is caused by smoking," he said. "Tragically, people who get lung cancer, and are not treated by chemotherapy, usually do not live longer than a year after it is diagnosed."

Others at WVU involved with the clinic include Dr. Charlotte Nath, Assistant Professor of Family Practice, who has special training in smoking cessation counseling; and Deborah Grant, a staff associate in the department who will conduct evening group sessions.

In addition, Dr. Michael Lewis, Chairman of the Department of Family Practice, will work with Doctor Pollard as a consultant to businesses who want to start smoking cessation programs in their offices.

For more information on the Smoking Cessation Clinic, call the WVU Department of Family Practice at 293-5204.

Those who live outside the Morgantown area may call the Cancer Information Service toll-free hotline: 1-800-4-CANCER.

Pain Relief Method Helps 1,000 People

G. Robert Nugent, neurosurgeon, reached a milestone recently.

Twice in one morning he did a procedure, for which he is internationally known, that rids trigeminal neuralgia sufferers of their intense facial pain.

All went well as usual, but his staff thought special congratulations were called for and had a decorated cake ready when he returned from the operating room.

When a surprised Doctor Nugent read the message on the cake he knew what all the fuss was about: His first patient of the day, a man from Summers County, had become the 1,000th person to experience his pain-relieving treatment since he introduced it at WVU Medical Center more than 15 years ago.

Doctor Nugent's trigeminal neuralgia technique uses a needle and radio frequency current instead of a scalpel, and avoids the major operation and lengthly hospitalization required by other surgical procedures. Patients enter the hospital the day before surgery for tests, have the treatment the next morning and go home after lunch.

Nugent usually performs two or three trigeminal neuralgia treatments each Friday morning.

His patients this year have come from as close as Morgantown and as far away as Buenos Aires, Argentina.

What You Didn't Learn In Medical School.

Making sound business decisions is a big part of building a successful practice. However, business administration isn't part of most medical school curriculums.

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MU School Of Medicine News

MARSHALL UNIVERSITY

Task Force To Look At School's Mission, Help Get Resources

The Marshall University Institutional Board of Advisors has set up a Medical School Task Force to examine the School's mission, determine the resources needed to carry it out, and develop an action plan for securing those resources.

A. Michael Perry, Chairman of the Board of Advisors, said MU President Dale Nitzschke asked for the task force as part of his year-long emphasis on the school and setting goals for its second decade.

"The board was unanimous in its support of this concept," said Perry. "Certainly action is needed to help meet the School of Medicine's needs, but we must first have a clear sense of mission and a clear vision of how that mission can be accomplished," he said.

Coal Executive Chairman

David G. Todd, a member of the Board of Advisors and Vice President of Ashland Coal, Inc. is Chairman of the Task Force, which includes representatives of health-care, veterans and business organizations. Members from the health-care field are Donald H. Hutton, President of Cabell Huntington Hospital; Steve J. Soltis, Executive Director of St. Mary's Hospital; Dr. Charles E. Turner of the Huntington Internal Medicine Group; and Timothy B. Williams, Director of the Huntington Veterans Administration Medical Center. School of Medicine Dean Lester R. Bryant is an ex-officio member of the group.

Todd said initial response to the concept has been positive.

"We've met with a great deal of enthusiasm," he said. "In the coming weeks and months we'll be focusing on fact-finding. We'll review the school's mission statement, look at ways to measure the school's impact on various groups, consider the impacts of not achieving that mission, and weigh various ways to achieve that mission and to enhance growth."

Nitzschke announced in June that, because of the School of Medicine's contributions to the region and its role as a powerful economic stimulus for West Virginia, he was making the school's further development his No. 1 priority for the 1987-88 academic year.

'Outside Perspective'

"Over the past several months, I've talked at length with our medical faculty," Nitzschke said. "Those interviews show that without question the school is making tremendously significant contributions to our region, but they also pointed up some critical needs.

"This task force will give us an objective, outside perspective which will help us take stock of where we are and show us where we need to be 10 years from now—and then help us get there," he added.

Grant To Study Flu Drug Received

The School of Medicine has received a two-year, $202,000 grant to study a potential flu-fighting drug in families, Dean Lester R. Bryant, M.D. has announced.

"This kind of project is a natural outgrowth of the intensive work of our faculty here and at the Veterans Administration Medical Center in preventing and treating infectious diseases," Doctor Bryant said. "It allows people in our area to begin using promising vaccines and drugs before they become available to the general public.

"It also helps the economic health of our region," he added. "Since 1980, Marshall's infectious diseases research has brought in more than $6.6 million in grants."

The new grant comes from Hoffman-La Roche Inc., to study rimantadine, according to Dr. Robert B. Belshe. Doctor Belshe is Marshall's Chief of Infectious Diseases as well as a researcher at the Huntington VA Medical Center.

Families to be Enrolled

"We will enroll up to 100 families, and when one family member has flu-like symptoms we'll visit the home and take samples," Doctor Belshe said. "Then we'll give the whole family either rimantadine or a placebo.

"First, we want to see if the drug makes people get better more quickly, and previous tests have indicated that it does," he said. "Second, we want to see whether it helps keep the flu from spreading from one family member to another. Doctors believe the flu is spread primarily through children bringing it home from school and passing it on to families. We want to see if we can interrupt this chain of events."

Doctor Belshe said that previous tests involving more than 2,000 people have shown that rimantadine is safe and that it is effective in both children and nursing home patients. He said this study will be important in the Food and Drug Administration's decision on whether to approve the drug.

Compiled from material furnished by the Office of University Relations, Marshall University.

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County Societies

MINGO

Harry Deitzler of Vienna, West Virginia, was the guest speaker for the meeting of the Mingo County Medical Society November 11 at Williamson Memorial Hospital.

Mr. Deitzler, a prosecuting attorney running for State Attorney General, addressed tort reform, professional liability insurance crisis, and availability of care. He encouraged physicians to be involved in the political process.—Diane E. Shafer, M.D., Secretary-Treasurer.

TYGART'S VALLEY

The Tygart's Valley Medical Society met October 15 in a joint meeting with the Broaddus Hospital Memorial Lecture at the Hospital in Philippi.

The guest speaker was Dr. Benjamin Felson, Professor Emeritus at the University Hospital Department of Radiology in Cincinnati. Doctor Felson spoke on "The Pneumonias—A New Look at an Old Subject," explaining in detail many of the mechanics by which various shadows and densities appear on x-ray film.

The second presentation by Doctor Felson was "The Pleura and its Effusions." Following a similar method of approach of clue combined with deductive reasoning to diagnosis, he illustrated numerous patterns of pleural effusions.

In the following business meeting there was lengthy discussion of tort reform and how to be politically effective.—Michael M. Stump, M.D., Secretary.

WESTERN

Dr. Bahu S. Shaikh from the Medical College of Ohio was the speaker for the meeting of the Western Medical Society November 10 in Spencer at Roane General Hospital.

Doctor Shaikh is Associate Professor of Medicine, Division of Hematology and Oncology, at the College.

John Glander, a representative of Physicians Reliance Association, then addressed the meeting.—Ali H. Morad, M.D., Secretary.

New Members

The following physicians were welcomed in November as new members of the West Virginia State Medical Association:

Central

Peter E. Ferguson, M.D., PO Box 398, Buckhannon 26201

Herbert C. Haynes, M.D., PO Box 87, Buckhannon 26201

Harrison

George Frederick, M.D., #1 Hospital Plaza, Clarksburg 26301, Family Practice

John Ratino, M.D., 101 Stoneybrooke Road, Clarksburg 26301, Plastic Surgery

Mercer

Sai H. Oh, M.D., Southern Hills Rehabilitation Hospital, 200 Twelfth Street, Princeton 24740

Monongalia

Thomas R. Adamski, M.D., WVU Medical Center, Dept. of Behavioral Medicine, Morgantown 26506, Behavioral Medicine

Steven L. Diehl, M.D., WVU Medical Center, Dept. of Radiology, Morgantown 26506, Radiology

Donald C. Fidler, M.D., WVU Medical Center, Dept. of Behavioral Medicine, Morgantown 26506, Behavioral Medicine

Summers

Cucufate T. Catral, M.D., Summers Community Clinic, PO Box 940, Hinton 25951

Students

Leon B. Briggs, Jr., 1125 10th Avenue, Huntington 25701

Harry Heasley Dinsmore, 3719 Route 75, Shoals 25562

Anthony M. Grieco, 1113½ 8th Street, Huntington 25701

George T. Heath, 198 B. Eastland Avenue, Morgantown 26505

David C. Jude, 2305 Adams Avenue, #14, Huntington 25704

John D. Juriga, Apartment 10, 1004 Pineview Drive, Morgantown 26505

Lorri Lee, PO Box 99, Stanaford 25927

Paul S. Legg, PO Box 6500, Morgantown 26505-6500

Linn M. Mangano, PO Box 6500, Morgantown 26505-6500

Christopher G. Maropis, PO Box 59, 194B Eastland Avenue, Morgantown 26505

James Douglas Mills, Apartment 1, 466 Inglewood Boulevard, Morgantown 26505

Sherrie Napier Miranda, PO Box 67, WVU Medical Center, Morgantown 26505

Steven Pribanich, 920 10th Avenue, Greenbrier Apartments #3, Huntington 25701

John S. Rodman, Jr., Apartment 15, 478 Harding Avenue, Morgantown 26505

Steven C. Southern, 4841½ Darnell Road, Huntington 25705

Gautam Chandra Thakur, PO Box 85, WVU Medical Center, Morgantown 26505

Colbert L. Wang, Apartment 17, 1008 Pineview Drive, Morgantown 26505

Danielle Nadine Welch, PO Box 92, WVU Medical Center, Morgantown 26505

Sandra L. Zahradka, 1542 Spring Valley Drive, Huntington 25701

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R. D. Morris, D. O. (New Martinsville)
C. McCool, M. D. (St. Clairsville)

Peripheral Vascular Disease
J. D. Holloway, M. D.

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A. M. Valentine, M. D.
W. E. Noble, M. D.

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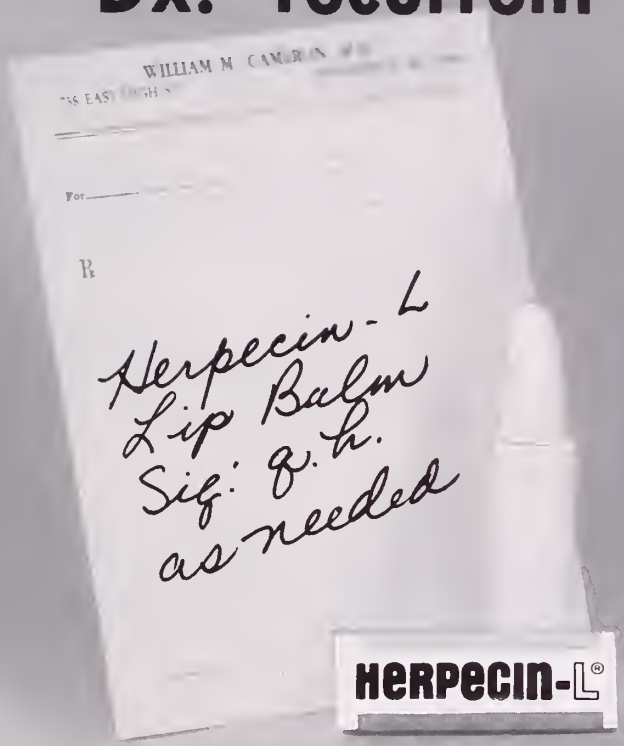

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BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS: *General.* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (*e.g.*, elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.
Use in the Elderly. May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e.g.*, impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).
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Information for Patients. Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
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Carcinogenesis, Mutagenesis, Impairment of Fertility. Carcinogenesis. Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis.* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility.* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy. Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism, use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
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Pediatric Use. Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**
Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions.* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal.* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary.* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic.* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric.* Hallucinations, depression, apathy, nervousness. *Endocrine.* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents, cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal.* Arthralgia, myalgia. *Miscellaneous.* Weakness, fatigue, insomnia.
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CHOOSE THE DATE AND LOCATION MOST CONVENIENT FOR YOU

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September 21	McClure House	Wheeling
October 12	Ramada Inn	Beckley

NOTE: The agenda for each seminar: Registration, 8:45 a.m.
Seminar, 9:00 a.m.-noon

If you have any questions, please call Candy Sayre at (304) 925-0342. You may register by mail by returning the form below to Candy Sayre, Loss Control Coordinator, West Virginia State Medical Association, P.O. Box 4106, Charleston, WV 25364.

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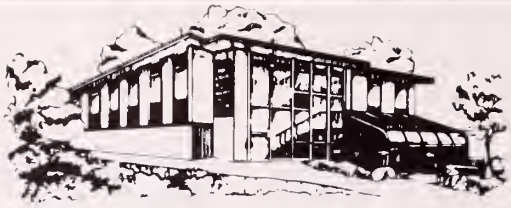

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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:
Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

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Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) Injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

* ADD-Vantage® is a trademark of Abbott Laboratories.

BRS-TG:L73B Date of issuance Apr. 1987

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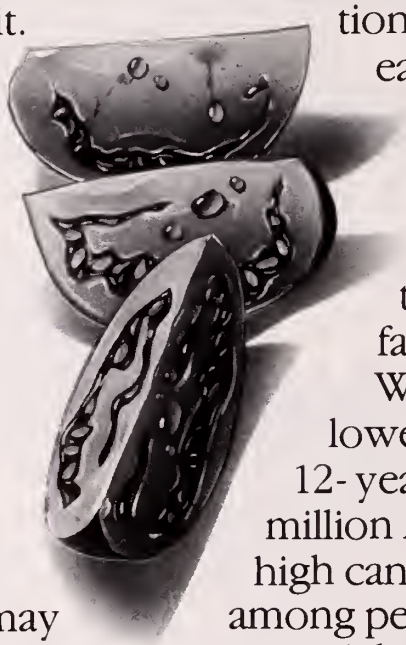

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Book Review

Living with Diabetes — Genell J. Subak-Sharpe with introduction and afterword by Drs. Charles Peterson and Lois Jovanovic, Co-Medical Directors, Diabetes Self-Care Program. $16.95. Doubleday & Co., Garden City, N.Y. 1985.

Living With Diabetes is based on the Diabetes Self-Care Program developed by researchers at Rockefeller University and Cornell University School of Medicine. Emphasis is placed on each person understanding his own response to exercise, food, stress, and the seeming multitude of things which can cause a rise or fall of the blood glucose. The Self-Care Program advocates frequent checks of blood glucose and multiple injections of insulin. The book gives a thorough review of diabetes including its history, dietary management, exercise, pregnancy, monitoring of blood glucose, and current methods of treatment including the insulin pump. Highly motivated persons with diabetes who want, or require, flexibility in their daily schedule while maintaining tight control of their blood glucose will be most anxious to read this book.

Many diabetics have experienced frustrations in trying to fit into rigid requirements of strict dietary regimes and the obvious limitations of control with one or two injections of long-acting insulin each day. There is no "free ride" promised here for persons with diabetes. The book offers a treatment choice for diabetics who wich to control diabetes and, in the process, lead a fuller life.

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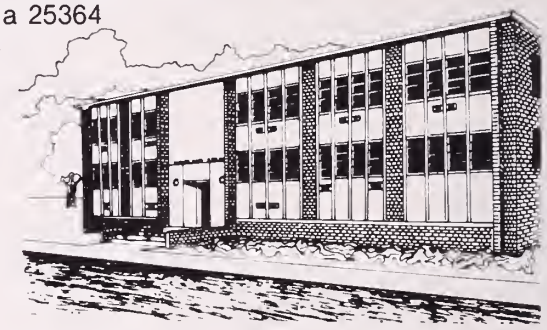

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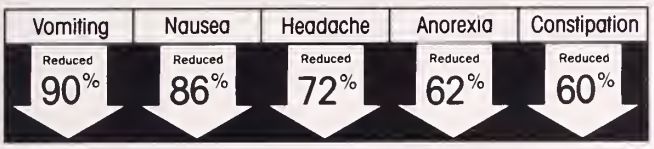

- **Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]**

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

References: 1. Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979 **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol® (IV)
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
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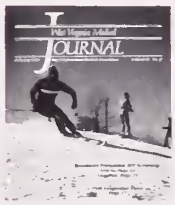

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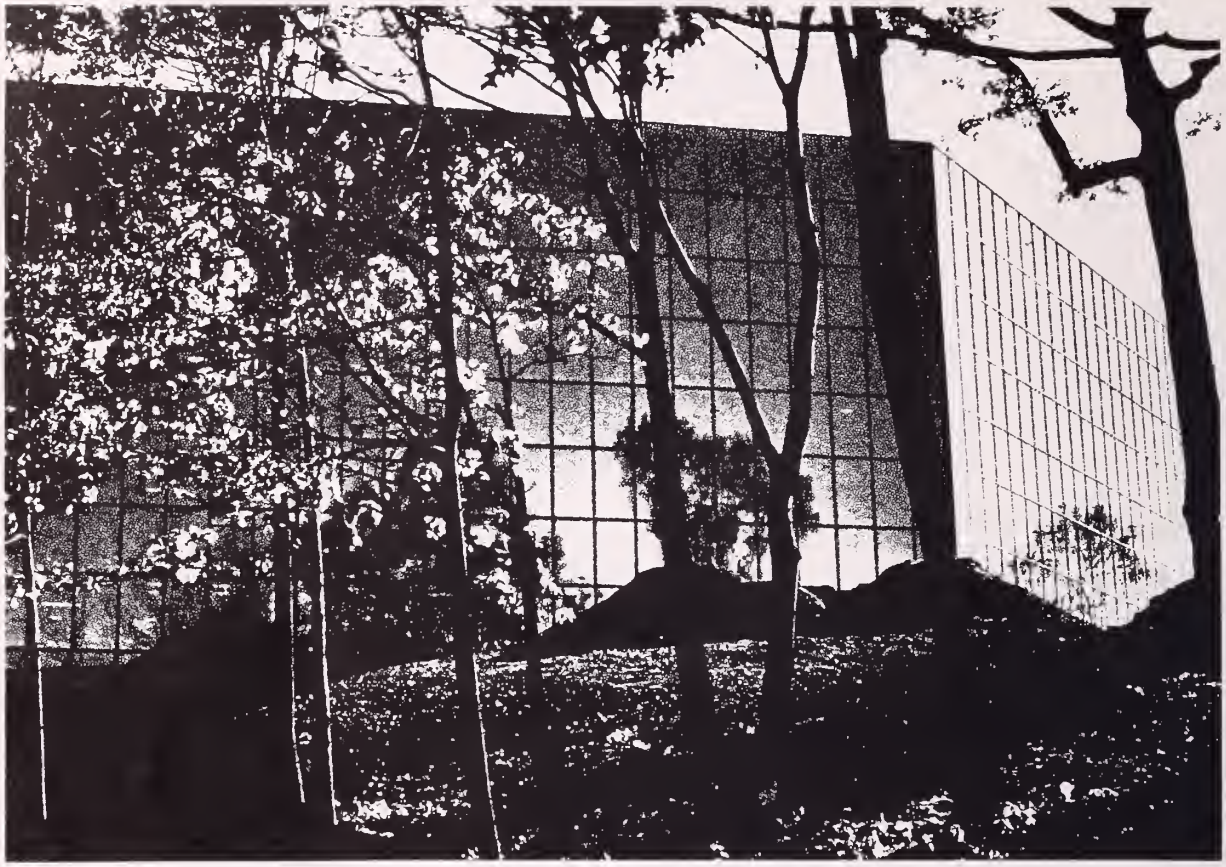

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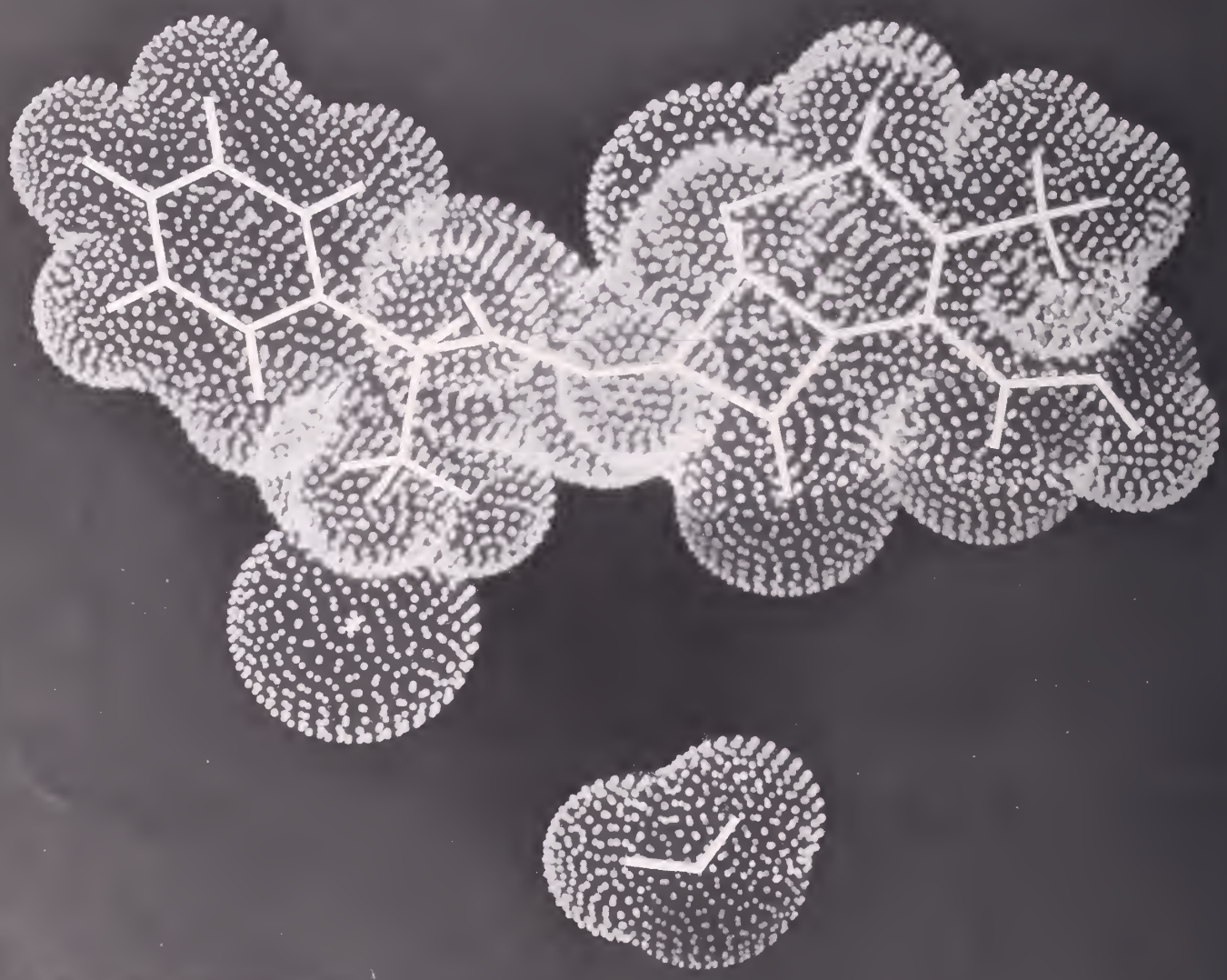

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In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

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TIAs And Carotid Endarterectomy: A Word Of Caution

JOHN F. BRICK, M. D.
Department of Neurology, West Virginia University Medical Center, Morgantown
JAMES E. BRICK, M. D.
Department of Medicine, WVU Medical Center

Carotid endarterectomy is said to be one of the most commonly performed surgical procedures in the United States. Patients with symptomatic carotid disease may receive some benefit from this procedure, assuming the surgical complication rate is ***very low****. Until controlled studies comparing the efficacy of carotid endarterectomy with that of antiplatelet drugs are available, therapy should be individualized based upon best available clinical judgment.*

Transient ischemic attacks (TIAs) are *sterotyped,* nonconvulsive, brief events of *focal* neurologic dysfuntion brought on by a temporary interruption of blood flow to a discrete area of the brain. Usually TIAs are less than 15 minutes in duration but rarely might persist for up to 24 hours (1). Other processes may cause spells of virtually identical symptomatology, i.e., subdural hematomas, seizures, migraine, brain tumors, ischemic infarction, and hemorrhagic infarction.

TIAs are typically divided into two groups, i.e., those affecting the anterior (carotid) and posterior (vertebro-basilar) circulation. From a therapeutic standpoint this separation is important for one principal reason: the identification of the potentially surgically correctable lesions involving the anterior circulation in contrast with those affecting the posterior circulation. While carotid endarterectomy is one of the most frequently performed surgical procedures in this country and may be of value, provided the surgical complication rate is very low (2), occlusive disease of the posterior circulation is now being approached surgically in only a few large centers. This latter mode of therapy is still appropriately termed investigational.

Warning Sign

By definition, TIAs do not typically lead to a permanent loss of nervous function or destructon of brain tissue. TIAs are important to the patient and the physician, however, as a warning sign of possible future stroke. Population-based studies from Rochester, Minnesota, suggest that the risk of stroke after a TIA is eight per cent in the first month, five per cent per year for the next three years, and about three per cent per year thereafter (2). Other studies have confirmed these results (3,4). While intuitively it appears that those patients with highly stenotic carotid lesions may be at greatest risk for a stroke after a TIA, the literature does not contain sufficient information to conclude this (2). Likewise, in a large study of patients with TIAs, no statistical differences in mortality were found between those patients with normal and abnormal angiograms (5). However, in a *different population* (those with asymptomatic neck bruits) it has been suggested that highly stenotic lesions may present a greater risk for stroke than more minor degrees of stenosis (6).

"In spite of numerous studies, the treatment of TIAs involving the anterior circulation remains controversial."

The repertoire of symptoms that the patient may exhibit during a TIA is almost limitless. Most, however, follow a few easily recognizable patterns. Those of the anterior circulation usually consist of transient monocular blindness, unilateral weakness, numbness, speech disturbance, or visual loss in varying combinations. Those affecting the posterior circulation typically lead to diplopia, ataxia, dysarthria, dizziness, numbness, or weakness. Importantly, none of these symptoms, *especially isolated dizziness,* should be taken as being indicative of vertebro-basilar ischemia (7).

Evaluaton of Patients

After a complete and careful history and physical, suitable studies may be indicated in the evaluation of patients with TIAs. Computerized tomography, electroencephalography, noninvasive vascular studies, echocardiography, and lumbar puncture may all be carried out when indicated, to exclude other causes of the patient's symptoms. Because of the risk inherent in cerebral angiography, application of this diagnostic aid should be delayed until a point is reached in the decision-making process when it is apparent that the patient is a surgical candidate (8).

Once a precise diagnosis of transient ischemic attack has been established and determination made as to whether the symptoms arise in the anterior or posterior circulation, decisions may be made regarding therapy. Therapy may be either medical or surgical, with strong arguments being made by advocates for both treatment approaches.

Therapy

For TIAs affecting the posterior circulation, medical therapy remains the cornerstone of treatment. Carotid endarterectomy is generally felt not to be of use in the treatment of symptoms arising in the posterior circulation (9,10), and the

extracranial-intercranial bypass procedures involving the posterior circulation remain of unproven benefit. Previously, medical therapy has been synonymous with systemic anticoagulation with warfarin derivatives. More recent recommendations list aspirin as a treatment option (3). Because systemic anticoagulation is not without some risk, treatment with aspirin has gained in popularity.

In spite of numerous studies, the treatment of TIAs involving the anterior circulation remains controversial. Powerful political and economic forces continue to wrestle with this question. Since the first carotid endarterectomy was performed in 1954 (13), an increasing number of physicians have been inclined to employ this procedure in treating patients with vague symptoms ranging from dizziness to memory loss, who are otherwise asymptomatic but unlucky enough to have a noise in their necks. There is no question in our minds, and in the minds of many others, that an excessive number of these operations are carried out in this country today (2,14,15). In 1984, 103,000 of these procedures were carried out in this country (2). It has been estimated that only 35,000 new patients are suitable candidates for this procedure each year (16). While it is difficult to say whether or not the procedure is under-utilized in the United Kingdom, it has been estimated that it has been used less than five per cent as frequently there as it has been in this country, in compared patient population (2). In one United States study, 50 per cent of the carotid endarterectomies were performed on asymptomatic (17) patients. These are frightening statistics when one considers that in this country the combined mortality and morbidity of this procedure (six-10 per cent) exceeds that of the natural history of asymptomatic carotid artery disease (one-two per cent) (6). In a national Hospital Discharge survey, 2.8 per cent of patients died following carotid endarterectomy before hospital discharge (2). Since stoke morbidity after endarterectomy is usually about three times the surgical mortality, this may represent a combined mortality/morbidity of greater than 10 per cent (2).

Scientific Basis Lacking

Surprisingly, a scientific basis for the exponential growth in the utilization of this procedure is almost totally lacking. While numerous anecdotal reports suggest that carotid endarterectomy may reduce the risk of stroke, we are aware of only three controlled studies (18,19,20), all carried out more than 20 years ago, that have attempted to answer this question. None of these studies gives an overall favorable impression of carotid endarterectomy in the prevention of stoke. Clearly, each of these studies has flaws, suffering from a variety of weaknesses such as variability in the surgeons' skills, methods by which "best available" medical therapy was compared, and even inclusion of patients with vertebro-basilar insufficiency in the study group.

"There is no question in our minds, and in the minds of many others that an excessive number of these operations are carried out in this country today."

The finding of an asymptomatic cervical bruit frequently leads to patient referral. Asymptomatic cervical bruits are not rare, being found in four per cent of the population over 40 years of age (21). Unfortunately, clinical examination is not an altogether reliable method for the determination of severity and location of cervical arterial disease (21); consequently a variety of noninvasive tests has been used to assess the carotid system. Frequently, patients with asymptomatic bruits are submitted to the rigors and risks of angiography and surgery for the purpose of preventing a stroke, a practice that highlights one of the most controversial aspects of this issue.

Surgical Risk

Angiography and carotid surgery are not without risk. Prophylactic carotid endarterectomy can only be justified if the combined risk of these procedures is less than that of spontaneous stroke (2). Several studies have addressed this question. The Framingham (22), Evans County, Georgia (21), and most recently, Toronto (6), studies have given us unique insights into this problem. It does appear that the risk of stroke in patients with asymptomatic carotid bruits is increased (one to two per cent/year). The risk is greater, however, for cardiac ischemic events than for stroke (6). Additionally, in one series (21) the type and laterality of the stroke *did not correlate with the side of the bruit.* While it appears that the risk of stroke increases if the degree of carotid stenosis exceeds 75 per cent (1.7-per cent vs 5.5-per cent risk of stroke), in most instances these patients do not have strokes without some warning (6). Those patients whose lesions progress seem to be at increased risk as well (6).

The risk of stroke in patients with asymptomatic bruits undergoing elective surgery has also been addressed (10,23,24). The risk does not seem higher than in those without bruits. Since most strokes in patients undergoing coronary bypass are thought to be embolic, it has (24) been suggested that only those with symptomatic bruits be exposed to the additional risk of angiography and carotid surgery prior to bypass (23). The efficacy of prophylactic carotid endarterectomy in asymptomatic patients prior to coronary bypass surgery has not been established (10,23,24).

The critical question that remains is whether a favorable risk-to-benefit ratio exists for carotid endarterectomy in patients who have carotid stenosis and focal TIAs in the disbribution of the appropriate carotid artery. Central elements to this question include the risk of stroke and death after TIAs and surgical mortality-morbidity. Clearly, the risk associated with surgery, i.e., mortality/stroke morbidity, is quite variable depending on where the procedure is performed. It can be readily seen that with the incidence of stroke after endarterectomy being approximately two per cent per year,

a combined surgical mortality/morbidity rate of four per cent or less is essential for any real benefit to be realized by the patient. Even in this best case scenario there is probably only a 33-per cent reduction in stroke rate over five years (2).

Carefully Individualized Therapy

We know that the risk of stroke in men and women with TIAs may be reduced by aspirin (3,4,25) and that in at least one study, warfarin anticoagulation was equally as beneficial as aspirin in preventing stroke (26). One then asks why submit a patient to the risk and expense of a carotid endarterectomy when aspirin might work just as well. Unfortunately, no studies comparing the two modalities have been carried out to date.

Medicine is as much an art as it is a science, and includes much which we do not understand completely. Carotid endarterectomy appears appropriate in certain symptomatic patients. Nevertheless, with incomplete proof of the efficacy of the procedure, we must consider carefully which patients should undergo the procedure and—just as important—where they should have it done. Moreover, until such a time as appropriately controlled studies have been carried out, therapy should be carefully individualized, based upon the best available clinical judgment.

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Coexistence Of Irritable Bowel Syndrome And Fibromyalgia

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The fibrositis syndrome (FS) or fibromyalgia is a very common problem that confronts rheumatologists daily. Irritable bowel syndrome (IBS) is another common entity that is often found in FS patients. Three hundred patients (three groups of 100) were studied prospectively using recently published IBS criteria. IBS was diagnosed in 49 per cent of primary FS patients, in 19 per cent of patients with secondary FS, and in nine per cent with arthritic controls. The reasons for these differences are discussed.

Introduction

Fibrositis or fibromyalgia syndrome (FS) is a form of nonarticular rheumatism characterized by diffuse myalgias and arthralgias accompanied by exaggerated tenderness at specific areas (1-3). It is one of the commonest rheumatologic disorders (4,5) and exists in both primary and secondary forms. FS is aggravated by anxiety, stress and poor sleep. It is found predominantly in women. FS is considered primary when no underlying cause is evident and usual laboratory tests are normal (3,6). Secondary FS resembles primary FS in all ways except that the secondary FS patient suffers from another medical condition (e.g. rheumatoid arthritis, chronic pulmonary disease, etc.) in addition to FS (7).

Another very common disorder, irritable bowel syndrome (IBS), is also aggravated by anxiety-tension and is predominantly a disorder of females. IBS (also referred to as spastic colon, "colitis," etc.) is considered the most common of all gastrointestinal disorders, accounting for 50-70 per cent of all patients with digestive complaints (8,9).

Yunus (10) pointed out that IBS and primary FS share muscle spasm as a common pathophyscologic mechanism, and stated that there is a high association of such entities as IBS, tension headaches and primary dysmenorrhea syndrome with primary FS. Other features common to these disorders are female predominance, anxiety-tension, and muscle pain and tenderness (pertinent muscle in respective syndromes, e.g. skeletal muscles in FS, colonic muscles in IBS). Psychological factors have been implicated in the genesis and perpetuation of both FS (10-12) and IBS (13,14) but the exact mechanism(s) still need to be determined. However, a comparison of the incidence of IBS with primary FS versus secondary FS has not been done.

It is the purpose of this communication to investigate the relationship between FS and IBS and to estimate the incidence of IBS in both primary and secondary FS sufferers.

Results

Patients in a private rheumatology practice were studied prospectively over a period of three months. One hundred patients comprised each of three groups. Group I consisted of patients who fulfilled the diagnostic criteria of primary FS as described in Table 1. Directed laboratory and radiological testing in these patients was within the normal limits consistent with the patients' ages. The mean age was 43 (19-68); there were 30 males and 70 females. Group II consisted of patients with an arthritis disorder who fulfill criteria for secondary FS. That is, these patients had nonrestorative sleep, specific and reproducible tender areas and complaints of musculoskeletal pain and achiness. Their laboratory and radiological tests were abnormal consistent with their underlying disorder. The mean age was 45 (18-70), and there were 21 males and 79 females. Forty-four patients had osteoarthritis, 33 had rheumatoid arthritis, 10 had gout and seven had systemic lupus erythematosus. Ten had other rheumatologic problems (e.g. pseudogout, septic bursitis, etc.).

TABLE 1
Diagnosis of Primary Fibrositis

1. History of chronic muscular aching in more than three months' duration accompanied by complaints of fatigue, morning stiffness, or gelling phenomena.
2. History of difficulty sleeping, especially intermittent sleep.
3. Physical examination demonstrating:
   (a) At least five tender myofascial trigger points.
   (b) Absence of synovitis, nodules, rash, or signs of focal weakness or inflammation.
   (c) Presence of muscle tautness or spasm in the upper or lower extremities.
4. Normal laboratory tests.

Group III was comprised of patients who had arthritic diseases but these patients did not have problems with sleep, nor did they have enough myofascial tender areas to fulfill FS diagnostic criteria. These patients constituted the arthritic control group. The mean age was 46 (20-74). There were 33 men and 67 women. Forty-one patients had osteoarthritis, 28 rheumatoid arthritis, eight gout, six systemic lupus erythematosus, and 17 had other disorders (e.g. pseudogout, Reiter's syndrome, etc.).

Patients in all three groups were given a simple questionnaire upon arrival at the office. It consisted of numerous questions regarding various organ systems. Three questions referrable to the lower gastrointestinal tract (GI) are shown in Table 2. If the answers to all three questions were "no," the patient was felt not to have irritable bowel syndrome (IBS) and no further study was done. Patients who answered "yes" to one or more of the questions were queried further, and a workup was pursued as outlined in Table 3 (adapted from Kruis et al. (16)). A numerical score was assigned to each patient. According to Kruis et al. (16), 26 points or more enables the investigator to diagnose IBS with 97-per cent specificity and 83-per cent sensitivity. A score of 44 points or more is associated with a 99-per cent

TABLE 2

Patient Questionnaire	Yes	No
1. Do you have problems with your bowels?	☐	☐
2. Do you experience abdominal discomfort when you get nervous (For example, do you get gas when you get anxious or nervous?	☐	☐
3. Do you experience diarrhea or constipation often?	☐	☐

TABLE 3

Questions to be Filled Out by the Patient	Yes	No	Score
1. Did you come because of abdominal pain?	☐	☐	34
Do you suffer from flatulence?	☐	☐	
Do you suffer from irregularities of bowel movement?	☐	☐	
2. Have you suffered from your complaints for more than two years?	☐	☐	16
3. How can your abdominal pain be described: burning, cutting, very strong, terrible, feeling of pressure, dull, boring, not so bad?			23
4. Have you noticed alternating constipation and diarrhea?	☐	☐	14
Check list to be filled out by the doctor			
1. Abnormal physical findings and/or history pathognomic for any diagnosis other than irritable bowel syndrome	☐	☐	-47
2. ESR 20 mm/hr	☐	☐	-13
3. Leucocytosis 10.000/ccm	☐	☐	-50
4. Hemoglobin female 12 g% male 14 g%	☐	☐	-98
5. History of blood in stool	☐	☐	-98
	Total		_____

Adapted from Kruis et al. (15)

specificity and a 64-per cent sensitivity. For the purpose of this communication, patients were considered to have IBS if their point score was 44 or greater.

On the basis of the initial screening questionnaire, 68 per cent of the primary FS patients had complaints referrable to the lower GI tract, as opposed to 33 per cent of secondary FS patients and 14 per cent of the arthritic controls. On the basis of a Kruis IBS score of 44 points or greater, 49 per cent of primary FS patients (10 men, 39 women), 19 per cent of secondary FS patients (four men, 15 women), nine per cent of arthritic controls (one man, eight women) were thought to have IBS. IBS did not appear to be proportionally more common in female than in male FS patients but was more common in arthritic control females.

Discussion

Perusal of the medical literature leads one to believe that there is an association between FS and other disorders of muscle tension including IBS. Yunus (11) published an elegant review of this subject. While most rheumatologists would agree that FS and IBS coexist in many patients, more data are needed. Yunus (10) found primary FS patients had IBS symptoms. However, uniform criteria for the diagnosis of IBS were not reported, and the incidence of IBS in secondary FS patients was not mentioned.

The application of the Kruis IBS criteria has the advantage of screening large numbers of patients for IBS without excessive cost or invasive tests. Of course, it is not a perfect scoring system and there are some methodological problems (16), but for the purpose of this investigation, it proved useful since several trends emerged. There clearly was a higher incidence (2.5 times) of IBS in primary vs. secondary FS patients. Although probably no one explanation is adequate to explain this, factors such as stress, depression, and anxiety may play more of a role in the primary FS patients, and these factors may be intimately related to the nonrestorative sleep patterns. In contrast, the arthritis patient's sleep may be interrupted by the pain and stiffness of their underlying disease, and they may be under different psychological stresses, with an emphasis toward altered body image, decreased work ability, and other problems related to a chronic, deforming musculoskeletal disease.

The present study has a population of FS patients that differ from other FS groups in that approximately 30 per cent of the FS patients are males. Many factors indigenous to the Upper Ohio Valley including high unemployment and shift work predispose certain males to develop FS (17). It appears that these males also tend to develop IBS in the same proportion as the female FS patients. Only one man in the arthritic control group had IBS.

While the findings in this study are not surprising, they do emphasize the importance of considering FS as more than simply a disorder with an impact solely on the musculoskeletal system. It is associated with nonmusculoskeletal symptoms, and these need to be addressed using, but not overusing, diagnostic tests and procedures. This approach is a rational one not only on cost-effective basis but also from the standpoint of avoiding iatrogenic problems.

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Medical Grand Rounds

West Virginia University Medical Center

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Varicella Zoster Virus Infections

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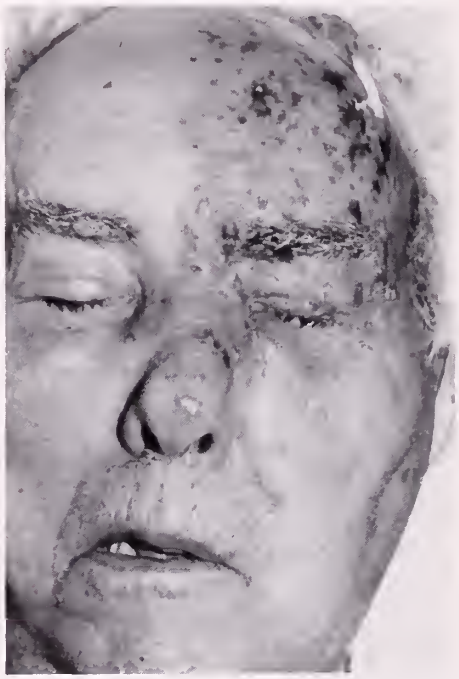
Much has been learned in recent years about the herpes viruses. The varicella zoster virus, one of the herpes viruses, causes much morbidity in normal and immunocompromised hosts. The management and therapy of this infection are discussed with a review of the indications for the use of steroids and acyclovir.

Case Presentation

D.M. is an 89-year old male who presented to the West Virginia University emergency room with complaints of severe left-sided headache and a rash. The patient noted pruritis, then blisters which became a painful rash on his left forehead. He complained of decreased vision in the left eye. He also had a fever, anorexia, vertigo and generalized weakness. Examination showed volume depletion and the lesions seen in the figure. The left periorbital area was edematous with erythema and vesicular lesions. The vesicles and erythema were confined to the distribution of the ophthalmic branch of cranial nerve five. There was no corneal involvement but severe conjunctivitis was present.

His admission laboratory studies were normal including a creatinine of 1.0mg per cent and BUN of 17. The patient was thought to have a severe case of herpes zoster ophthalmicus. He was hospitalized and given intravenous saline. Acyclovir (Zovirax) 800mg IV every eight hours was started. The patient improved with crusting of his lesions and decreased pain but on day five of treatment developed acute renal failure with a creatinine of 4.3mg per cent and an altered mental status with somnolence and vertigo.



Examination of the patient showed volume depletion and a rash on his left forehead.

At this time, his other medications included cimetidine (Tagamet) 400 mg po qhs; diqoxin (Lanoxin) 0.25 mg po qd, and meclizine (Antivert) 25 mg po q6. The acyclovir, meclizine and cimetidine were stopped. Post-void residual was minimal and ultrasound of the kidneys revealed no evidence for obstructive uropathy. He was euvolemic at the time. His urinalysis revealed no active sediment and a urine culture subsequently revealed no growth. Fractional excretion of sodium was 2.4, and the renal failure index was 3.3, consistent with acute renal failure.

With management of his volume status and discontinuation of all possible nephrotoxic drugs, the renal failure resolved with a creatinine of 1.4mg per cent on discharge to a nursing home. He subsequently has been followed for severe, post-herpetic neuralgia.

With the explosion of knowledge about the biology of herpes viruses, and with the availablity of anti-viral therapy, there has been a renewed interest in the clinical management of herpes zoster infections. Children with primary varicella infections suffer but seem to recover more easily, and usually experience fewer consequences of this infection; some clinicians use the words "benign illness" in referring to this disease of childhood. But this virus is associated with great morbidity in adults as demonstrated by the above case.

Varicella zoster, disseminated varicella in the immune-compromised host, and post-herpetic neuralgia are fairly common clinical problems, and consume much time and mental energy of physicians in both primary and tertiary-case settings.

The nomenclature for these disease processes is somewhat confusing but has an interesting history. Herpes is of Greek derivation meaning "to creep." Zoster is also Greek,

referring to "belt." Shingles is an Anglican form of the Latin cingulus or the French chingle, both referring to belt or girdle. Varicella is a French diminutive term for variola or small pox, and chicken pox is probably derived from the similarity of the size of the lesions to a seed-producing plant called *pois chiche* by the French (1).

Microbiology

As indicated, the varicella zoster virus is a member of the herpes virus family. It contains a centrally located double strand of DNA with a surrounding envelope. The virus is an obligate intracellular organism.

The virus invades the human cell and begins its replication process while destroying the host cell. The cytopathic effect within the cell begins as a focal process with subsequent cell-to-cell spread; the cytopathologists see extension in a radial pattern. Clinically, small erythematous macules develop and then develop into vesicles on an erythematous base. These pustulate and then scab.

Microscopically, the vesicles involve the epidermis and dermis. Epithelial cells undergo degenerative changes characterized by ballooning with subsequent appearances of multinucleated giant cells and prominent eosinophilic intranuclear inclusions. The vesicle evolves and the collected fluid becomes cloudy as a consequence of the appearance of PMNs, degenerated cells and fibrin. Ultimately, the vesicles either rupture and release the fluid, which can then be infectious for others, or gradually become reabsorbed (2).

Humans are the only known reservoir for this virus. Chickenpox follows exposure of a susceptible or seronegative individual to the varicella zoster virus, and this represents the primary form of the infection. The spread is probably respiratory. The varicella virus is endemic in the population at large but it becomes epidemic among subsceptibles during characteristic seasonal periods, namely, late winter and early spring. Obviously, population density has an influence which probably explains the high incidence in tropical countries and among students and the military. Herpes zoster can lead to chicken pox in another individual who is seronegative or disseminated varicella in an immunocompromised host, yet the reserve is not seen; i.e., chicken pox leading to herpes zoster in another individual.

Varicella zoster virus (VZV) becomes latent as do other members of the herpes family. The virus establishes latency within the dorsal root ganglion and remains so until an appropriate stimulus leads to reactivation. The mechanisms of latency and reactivation are unknown. Reactivation of varicella zoster virus infection is less common than for herpes simplex virus (3).

"The mechanisms of latency and reactivation are unknown. Reactivation of varicella zoster virus infection is less common than for herpes simplex virus."

Diagnosis

The diagnosis of VSV infection is a clinical one. Grouped vesicles on an erythematous base in multiple stages of formation on the face and trunk are easily recognized as VZV infection. Besides the diagnostic rash, numerous systemic signs and symptoms can be seen.

Low-grade fever lasting three to five days, malaise, pruritus and anorexia are often seen. Secondary infections of the skin lesions are usually caused by staphylococcal or streptococcal organisms. Clinical judgment and gram stain and culture of the pustular fluid will help to make the decision to institute antibiotics for lesions that persist past the normal time course.

The central nervous system is the most common extracutaneous site and usually results in a form of encephalopathy manifested by acute cerebellitis with ataxia. Encephalitis is also well described in 0.1-0.2 per cent of individuals with VZV infections; they present with a decreased level of consciousness, headache and sometimes vomiting, fevers and seizures. The encephalitis is usually self-limiting but there is a five- to 20-per cent mortality rate, and 15 per cent have neurologic sequellae. Polyradiculitis, aseptic meningitis and myelitis are also described. The pathophysiology of CNS manifestations is not well known but direct invasion of the CNS or allergic responses to damaged neural tissue are the two most common explanations (3). The therapy of encephalitis is only supportive; antivival agents do not seem to alter the course.

Varicella pneumonitis is more commonly seen in adults. Progressive cough and dyspnea are noted, and respiratory distress may progress rapidly as a consequence of hemorrhagic necrosis of the lung. The chest radiograph will show diffuse nodular infiltrates, and pulmonary function studies will reveal normal ventilation but diminished diffusion of gases. Asymptomatic pneumonitis is probably common (4).

Other organs affected include the gastrointestinal system, with vomiting, and the hematologic system, with bleeding secondary to thrombocytopenia. Arthritis, myocarditis, nephritis and orchitis have been reported. Varicella encephalitis should be considered if vomiting is protracted and associated with altered mental status (4).

The patient presented above suffered with herpes zoster in the distribution of the ophthalmic branch of cranial nerve V. The presentation and clinical course were classical for herpes zoster ophthalmicus. He had three weeks of excruciating pain within the dermatome of the vesicular eruption.The distribution of lesions in patients with zoster in descending order of frequency are: the thoracic, cervical, lumbar, facial and sacral areas. T3 through L3 are the dermatomes most commonly affected.

There are no known precipitating factors for zoster ophthalmicus. Clinical manifestations may vary from superficial conjunctivitis,

hyperemia and scleritis to keratitis, iridocyclitis and development of glaucoma. Many eye complications can occur: lid ulceration, secondary bacterial infection, ocular muscle palsies, glaucoma and vasculitis with ischemic complications (1).

Localized and disseminated herpes zoster infections are most frequent and severe in immunosuppressed patients receiving chemotherapy. Patients with lupus, transplants, malignant diseases and acquired immune deficiency syndrome are all predisposed to this infection. The incidence of VZV in marrow transplants is 30 per cent and around 35 per cent in patients receiving chemotherapy for Hodgkins lymphoma (3).

Therapy: Acyclovir

Acyclovir is an antiviral agent that prevents replication of herpes viruses by interrupting DNA synthesis in viruses but not in host cells. Numerous investigators have evaluated the use of acyclovir in varicella zoster infections. It should not be used in normal children with chicken pox. One small study showed arrest of the development of shingles in all of five patients when the drug was started within 24 hours of onset (7). Another study showed that five mg/kg IV every eight hours increased the rate of pain disappearance during the first two weeks in 27 patients, but there was no change in the long-term course or post-herpetic neuralgia (8). Several studies support the use of acyclovir in VZV infections in the immunocompromised host before dissemination occurs (5). Topical ophthalmic antiviral agents are of unproved efficacy in zoster ophthalmicus (1). Although IV acyclovir did help resolve the skin lesions in zoster ophthalmicus, it did not clear the ocular involvement (9).

Although acyclovir has been widely used and is a safe drug, complications can occur as demonstrated by the case presented. Altered mental status was seen and can be related to acyclovir (10); nausea, vomiting, and abdominal pain are also reported. The first reports of renal insufficiency occurring in humans appeared in 1979 (11). Elevated creatinine levels have been shown to occur in 48 per cent of patients receiving IV acyclovir for acute herpes zoster infections (12). In almost all cases the renal insufficiency is self-limited and brief. The pathophysiology has been shown in animal studies: a transient crystal obstructive nephropathy occurs when the concentration of acyclovir in the collecting duct of the tubule exceeds the drug's solubility. This probably occurs for short periods when acyclovir plasma concentrations are very high immediately after a bolus injection. Adequate volume replacement and slow administration of the drug are the keys to prevention of renal toxicity (13). Clinicians should be aware of additive drug toxicities, especially with narcotics.

Therapy: Steroids

There is no clear answer in the medical literature on whether to use steroids in patients with herpes zoster. Shelly (15) enthusiastically supports their use in patients older than 60 years with localized zoster who are not immunocompromised. The authors in Harrison's *Textbook of Medicine* are more restrained.There is no good evidence that steroids cause dissemination of the virus in patients who are not immunocompromised with localized zoster, and they probably do decrease pain and prevent some post-herpetic neuralgia. The treatment regimen most often recommended is prednisone 40-60 mg orally for five to seven days with reduction of the dose over two weeks (16,17,18).

TABLE

Reported Therapies for Herpes Zoster

Amitriptyline (Elavil)
Levodopa (Sinemet)
Ablation of dorsal root ganglion
Acupuncture
Biofeedback
TENS (transcutaneous electrical nerve stimulation)
Carbamazepine (Tegretol)
Acyclovir (Zovirax)
Autologous blood transfusions
Liver extracts
Protamide (extract of pig stomach)
B12 injections
Cimetidine (Tagamet)
Irradiation of the dorsal root ganglion
Tropical capsaicin (Zostrix)
Ultrasound

Because of the severity of the problem and lack of a highly efficacious treatment, numerous therapies for post-herpetic neuralgia have been reported in the literature (Table). Besides the analgesics such as acetominophen (Tylenol), NSAIDS'S (Motrin), and codeine, amitriptyline (Elavil) is the most common agent described as being effective in the treatment of post-herpetic neuralgia. In a study reported in 1982 (19), 16 of 24 patients had good-to-excellent pain relief using low-dose amitriptyline.

Vaccine

On the horizon is a vaccine that will prevent this common disease. The live attenuated vaccine developed and used clinically in Japan has not been licensed in the United States but it seems to be safe and effective when used in children. Adults are less well protected against varicella household exposure. Three major arguments against the use of the vaccine in the United States are heard: that this is a benign illness in healthy children and we shouldn't try to prevent it, the fear of subsequent zoster, and the creation of a large class of "adult susceptibles" because of waning immunity. The development, use and debate about the varicella vaccine are nicely summarized by Gershon (20).

In conclusion, the varicella zoster virus can cause serious disease to a wide spectrum of patients. The understanding of the biology of this virus has allowed us to begin to treat the manifestations of the illness and perhaps to prevent it in the future.

Generic/Trade Names

Generic drugs (with trade names in parentheses) mentioned in this article are: acyclovir (Zovirax), cimetidine (Tagamet), diqoxin (Lanoxin), meclizine (Antivert), acetominophen (Tylenol), amitriptyline (Elavil), carbamazepine (Tegretol), and levodopa (Sinemet).

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality, unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the author's name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal*, which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*. Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus*.

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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Mandatory Premarital HIV Screening In

BRADLEY A. WOODRUFF, M.D.
ROY C. BARON, M.D.
DAVID K. HEYDINGER, M.D.
West Virginia Department of Health

Editor's Note: This article is being published at the special request of the Director of the West Virginia Department of Health. Comments on the article appear in the Editorial section.

A recent article in the *Journal of the American Medical Association* (JAMA) analyzed the projected costs and effectiveness of compulsory premarital screening, for infection with the human immunodeficiency virus (HIV) which causes acquired immunodeficiency syndrome (AIDS) (I). On a nationwide scale, such a program would cost more than $100 million annually, detect fewer than 0.I per cent of the HIV infections in the United States, and would incorrectly label 350 uninfected persons as infected. The authors stated that "the more resources that we devote to such marginally effective ventures, the fewer resources we will have to develop truly effective public health programs . . . such programs should be motivated by an analysis of the epidemiologic facts rather than a response to political pressures . . .". In order to provide an analysis relevant to the AIDS prevention efforts in West Virginia, we will apply the methods used in the JAMA article to the population of West Virginia.

Low Risk

In I986, 13,900 marriages were registered in West Virginia. Mandatory premarital screening would necessitate testing approximately 27,800 individuals annually, the vast majority of whom are at extremely low risk of acquiring HIV infection. In the JAMA article, the proportion of donated units of blood found to be positive (40/100,000) was used as an estimated prevalence of infection in low-risk groups. This prevalence is six times higher than the prevalence in West Virginia donors where, according to the West Virginia Red Cross, only 6/I00,000 units were positive from October I, I986, to October 1, I987 (personal communication from Mabel Stevenson, M.D., of Huntington, Director, Tri-State Red Cross Blood Services). Also, data from the military screening program show that the rate of seropositivity for recruits from West Virginia (80/I00,000) is about half the rate among recruits from the entire nation (150/I00,000) (2). Therefore, we must conclude that the prevalence of infection among low-risk groups in West Virginia is substantially lower than in the United States. If you assume that the prevalence of HIV infection among low-risk persons in West Virginia (13/100,000) is one third the prevalence in the United States, only four of the 27,800 applicants for a marriage license in West Virginia would be infected.

> ***"Mandatory premarital screening would necessitate testing approximately 27,800 individuals annually [in West Virginia], the vast majority of whom are at extremely low risk of acquiring HIV infection."***

Test Measurement

The accepted procedure for HIV testing is as follows: an enzyme immunoassay (EIA) series is performed; that is, an EIA test is done, and if positive, it is repeated. If the repeat EIA is also positive, a confirmatory Western blot test is done. Only if the Western blot is also positive is the subject considered infected with HIV.

The performance of any screening test is measured by sensitivity and specifity. Sensitivity is defined as the proportion of persons with the disease giving a positive result with a particular test. Low sensitivity results in many false negatives, meaning that persons truly infected are not identified. Specificity, on the other hand, is expressed as the proportion of persons without the disease who test negative. Low specificity results in many false positives, that is, persons who are not infected but are incorrectly identified by the screening test as infected.

The JAMA article, after reviewing the available data on the sensitivity and specificity of the EIA and Western blot tests, assumes a sensitivity of 98.3 per cent and a specificity of 99.8 per cent for an EIA series. The Western blot is assumed to be 92- per cent sensitive and 95- per cent specific among persons who test positive with the EIA. The 27,800 West Virginia marriage license applicants comprise 27,796 uninfected and four infected persons. The EIA series will detect all four of the infected applicants (98.3 per cent of four). The series will also be appropriately negative in 27,740 persons who are not infected (99.8 per cent of 27,796) but falsely positive in 56 uninfected persons. These 60 EIA-positive persons (four infected and 56 uninfected) will undergo Western blot testing. All four truly infected persons will be positive (92 per cent of four) and be identified as HIV carriers. However, the Western blot will be correctly negative in only 53 uninfected pesons (95 per cent of 56). Therefore, a mandatory premarital screening program would actually label seven persons as HIV carriers, three of whom are, in reality, uninfected false positives.

West Virginia

Applying the assumption used in the JAMA article regarding the proportion of first-born children concieved premaritally, the attack rate for infants of infected mothers, and the overall prevalence of premarital sex between eventual marriage partners, detection of these four infected persons would have the potential for preventing the spread of HIV infection to two spouses and two infants.

Test Costs

The total estimated cost for premarital screening includes $6 per EIA series and $50 per Western blot. An even more expensive aspect of the program is the obligatory counseling necessary to explain the purpose and results of the test to each applicant: $25 per person. Therefore, the total estimated annual cost of such a program in West Virginia would be $864,800: $169,800 for testing (assuming 27,800 EIA series and 60 Western blot tests) and $695,000 for counseling. If we assume that four previously unknown infections would be identified by this program, each infected person identified would cost $216,200. By contrast, the current state health department program of free voluntary testing targeted toward high-risk groups has identified 67 seropositive persons. Assuming the same laboratory and counseling costs per person as above, this program spends $924 per detected infection, or less than 1/200th of the cost per infected person identified by a mandatory premarital screening program.

Focus On High-Risk Groups

Those who advocate the application of mandatory screening programs for low-risk groups need to be aware that the overall accuracy of any screening test is a function of the prevalence of the condition which one hopes to detect. In West Virginia, the very low prevalence of HIV infection among marriage license applicants accounts for the poor results seen above, in spite of the use of highly sensitive and specific tests.

Because resources are scarce, we cannot afford to implement a costly screening program which detects only a very small proportion of infected West Virginians and which falsely labels 43 per cent of those who test positive. Screening efforts directed toward those groups in which the prevalence of infection is highest (male homosexuals, intravenous drug abusers, and hemophiliacs) will detect more efficiently infected pesons and target more effectively educational and risk-reduction programs.

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President's Page

"The 99+ denotes a contribution of $100 or more to a political action through membership in WESPAC-AMPAC.

99+

Roughly 25 per cent of WVSMA's members are members of WESPAC and AMPAC. A smaller percentage wear the 99+ pins on their lapels. A number of their spouses also have the 99+ pins. The 99+ denotes a contributor of $100 or more to political action through membership in WESPAC-AMPAC. WESPAC is the political action arm of WVSMA and AMPAC is the American Medical Political Action Committee.

These voluntarily contributed dollars are used toward the election campaigns of candidates supported by PACs. More dollars mean greater support for more candidates who share Medicine's views and philosophy. We need to identify and support those candidates who understand the issues of tort reform, PRO, MAACs, Mandatory Assignment, DRGs, RVS, etc. It is the legislative process which ultimately addresses these key issues.

WESPAC supports laws which limit campaign contributions to $1,000 per candidate per election. It would be delightful to have enough physicians contributing $100 so WESPAC could offer the maximum to candidates we support. The fact is, however, that WESPAC has never offered more than a couple hundred dollars in candidate support. Most candidates receive $100 or $150 from WESPAC because there is insufficient money to permit larger contributions.

The media often accuse PACs of subverting the democratic process. The truth is, however, that PACs are nothing more than the collective contributions of like-minded individuals. There are persons in every state who offer more support to candidates than WESPAC does. Selecting 10 candidates whom they back at the maximum $1,000 means those persons offer more support individually than any WESPAC contributions ever offered. We believe a contribution from WESPAC simply says to a candidate, "Doctors appreciate and respect your candidacy. We believe you are serving or have the potential to serve the public in the office you seek."

Supporting 100 candidates in their respective bids for office at $100 per candidate requires $10,000 per election. WESPAC has rarely had that amount to spend on the primary and general elections combined.

If half of our active members chose to join WESPAC at the $100 sustainer level and the other half at the $50 regular membership level we would have $150,000 per election cycle. Such money would enable us to make larger contributions to candidates whose ideas and views we support. And the extra dollars could mean the difference between winning and losing the election.

And a WESPAC contribution of $100 or more does not preclude an individual from backing a favorite candidate of one's choice to the fullest extent allowed.

At the end of 1987, West Virginia ranked ninth among state associations in percentage of PAC contributions made by members with 566 total contributors. Just four years ago we ranked 47th or 48th and had only 12 sustaining members and less than 100 PAC contributors overall.

But we cannot rest on our laurels. Let's improve. Let's shoot for 50 per cent or better with 75 per cent sustaining memberships. Let's shoot for the moon and see if every doctor attending the Annual Meeting wears the 99+ pin and has his name in our WESPAC roster list.

—Cordell A. De La Pena, M.D.

Mandatory Premarital HIV Screening

On Page 22 appears a special article, "Mandatory Premarital HIV Screening in West Virginia" from the West Virginia Department of Health. A request for early publication was made by Dr. David K. Heydinger, Director of the West Virginia Department of Health.

Because it differs from the position of the West Virginia State Medical Association and of this *Journal* we have rearranged our publication schedule to include the article in this issue in order that our readers might be exposed to differing views from responsible professionals within our own state. We cannot, however, withhold making comment on it.

Early in the article the authors quote a JAMA article making the point that ". . . (effective) programs should be motivated by an analysis of the epidemiologic facts rather than a response to political pressure . . ." We could not agree more! But what are the "epidemiologic facts" in West Virginia?

It is most unlikely that these facts are identical to or, perhaps, even similar to the group of statistical assumptions made in the body of this article. The statistics employed come from differing sources all well-suited to arrive at a predetermined conclusion.

The truth is that the "epidemiologic facts" in regard to AIDS in West Virginia are unknown. It bothers us to find the West Virginia Department of Health advocating the position that these epidemiologic facts should remain unknown.

We, quite frankly, believe that it is impossible for the Department of Health to meet its responsibility as guardian of the public health in West Virginia if it persists in avoiding the epidemiologic knowledge required to meet that responsibility.

The West Virginia State Medical Association advocates, in essence, the creation of a series of filters, easily and efficiently applied, to screen out that unknown number who will test positive to the HIV virus, thereby allowing those required to be in intimate contact with them to take any special precautions required to avoid infection, and that we might thereby acquire the epidemiologic facts needed to further assess and make objectively determined plans for the control of AIDS. We believe the Department of Health is swayed by political concerns in its approach to AIDS.

We have serious questions about "the obligatory counseling necessary to explain the purpose and results of the test to each applicant." A figure of $695,000 is projected for counseling 27,800 marital license applicants at $25 per applicant. It does not seem obligatory at all that a person testing HIV negative be given $25 worth of counseling. We are well aware of the lag time in sero-conversion but an explanation of even this for $25? Who is kidding whom? The maximum number of positive responders by the Department's own figures is seven. The cost of counseling these would probably be more than seven times $25 but hardly the figure used.

What we really need is some obligatory good sense applied to the study and control of AIDS. Let's leave out the politics and the sympathy and the tears and the emotionalism being attached to this illness. Let's stick to the facts. Let's get the facts!—SDW

Kenneth G. MacDonald, M.D., R.I.P.

It seemed to many of us that he had always been around, symbolized, represented, and was simply a part of the fabric of, the West Virginia State Medical Association. That's why it came as such a shock in 1980 when Kenny MacDonald announced that he would no longer be a candidate for the office of Treasurer of the WVSMA.

It was hard to believe. Difficult to grasp—almost like coming to grips with the first inklings of your own mortality. Some things really are not permanent—there's something to think about, maybe to worry about.

He had been Treasurer of the Association for just 15 years but he had been around longer than that in other capacities and he never seemed to miss a meeting. It is probably true in any active organization that no one is required to put in more time week to week and month to month than the Treasurer. It's a job where a lot is expected and little appreciation is ever rendered.

It's a little late to express the appreciation now. We tried to say it via a wordy commendatory resolution in 1980 and missed the mark. We won't come much closer here. His contributions were awesome.

(Continued on Next Page)

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author shall be held entirely responsible. Editorials printed in The Journal do not necessarily reflect the official position of the West Virginia State Medical Association.

We are simply left to wonder at them, and at him.

Kenneth G. MacDonald, Sr. died in Charleston, West Virginia on November 26. The profusion of his community and professional activities have been listed elsewhere in this *Journal*. Any one of these would do sufficient honor to most men. Their sum says clearly what anyone who ever knew him could say about Ken. He gave more than his share and did more than was ever expected.

The staff of the *Journal* and members of the Association administrative staff express our great sorrow at the passing of Doctor MacDonald, and we extend to his wife and members of his family our sympathy in this time of their grief.—SDW

Milestones

America's family physicians observed two milestones in 1987. The discipline's specialty organization—the American Academy of Family Physicians—celebrated its 40th anniversary in June. And as the year drew to a close, the Academy enrolled its 60,000th member, affirming its position as one of the largest medical specialty groups in the world.

Those are monumental accomplishments for a type of medical practice which was thought to be on the way out just a few years ago. From 200 general practitioners fighting for their profes sional lives in 1947, the Academy has matured to become a significant force in American medicine.

The 60,000th member, Kari Ann Miller, M.D., is in private practice in Woodbury, Minnesota, a suburb of St. Paul.

Doctor Miller is residency trained and board certified in family practice—a specialty the Academy was successful in establishing in 1969. Family physicians of today must recertify every six years, the first medical specialty to have mandatory recertification.

One of the ways Doctor Miller and her fellow family physicians keep abreast of the latest advances in medicine is through continuing medical education. The Academy was the first medical association in the country to require its members to earn mandatory CME. AAFP members must earn 150 hours of approved CME to retain membership.

"It's one of the ways of ensuring quality health care to the American public," said AAFP President Harry L. Metcalf, M.D., of Williamsville, New York. "You realize how important the Academy's CME requirement is when you consider that nearly one third (30.5 per cent) of the office visits to physicians in this country are to family physicians," he said.* "That's nearly three times as many visits to family physicians as to the next highest specialty (internal medicine, 11.6 per cent).—*Guest Editorial by the American Academy of Family Physicians.*

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*Source: U.S. Department of Health and Human Services, Public Health Service, National Center for Health Statistics, 1985 Summary: National Ambulatory Medical Care Survey, January 23, 1987, Number 128, p. 3.

Our Readers Speak

Governor Dukakis Opposed

Editor's Note: The following letter to Massachusetts Governor Michael Dukakis, who is a candidate for United States President, was received by WVSMA for sharing with its members. The letter speaks for itself as one doctor's expression of his feelings regarding the mandatory assignment issue and Dukakis' role in the matter. The letter was copied to all state medical societies/ associations.

As one who once held a Massachusetts medical license with pride, and also one who felt that some 25 years ago I received possibly the best medical training in the world in Boston, Massachusetts, it is with great regret that I feel compelled to write this letter. When I read about the Medical Society's Resolution #49 informing other medical societies of the problems and deteriorating medical care (of which I have known) in Massachusetts over the last number of years, I found it almost laughable that one of your legislators could have objected or thought any differently. For you to have not vetoed the Medicare reimbursement for licensure is not only unprecedented but against all of the civil libertarian principles that this country stands for.

As a resident of the state of Arkansas now, I will certainly do whatever is within my power to keep a person such as you from being elected to the Presidency of the United States, and I certainly hope that all other doctors within the United States will rally against the socialist principles which you promulgate. I hope that our Lieutenant Governor, Winston Bryant, who is leading your campaign in this state, will give a second thought after he hears from interested individuals. I certainly join the Massachusetts Medical Society in opposing your nomination.

R. Sloan Wilson, M.D.
Suite 519 Doctors Bldg.
500 So. University Ave.
Little Rock, AR 72205

AMA President Davis To Speak At Convention House Session

Dr. James E. Davis, who will be installed as President of the American Medical Association in June, will address the first session of the WVSMA House of Delegates during the Association's Annual Meeting in August.

Doctor Davis, a surgeon from Durham, North Carolina, will speak to the House Wednesday afternoon, August 17.

The 121st Annual Meeting will be held August 16-21 at the Greenbrier in White Sulphur Springs.

Previous Format Resumed

The convention returns to its previous Tuesday-Through-Saturday format after being condensed to a Saturday-through-Tuesday program in 1987 because of the limited availability of the Greenbrier.

General scientific sessions will be held Thursday, Friday and Saturday mornings, August 18-20, with meetings of WVSMA sections and specialty societies being held Friday afternoon, August 19.

The Executive Committee will meet Tuesday afternoon, August 16, Council will meet Wednesday morning, Thursday afternoon will be set aside for recreation and golf and tennis tournaments, and the second and final House session will be held Saturday afternoon.

Former Speaker of AMA House

Doctor Davis was chosen AMA President-Elect at its June, 1987, Annual Meeting. Before that, he had served as Speaker of the AMA House of Delegates since June, 1984, after serving as its Vice Speaker since 1981.

James E. Davis, M.D.

Doctor Davis has long been active in organized medicine. Among the positions he has held are President of the North Carolina Medical Society, the North Carolina Surgical Association, the North Carolina Chapter of the American College of Surgeons, the North Carolina Division of the American Cancer Society, and the Greater Durham, (N.C.) Chamber of Commerce. He is a former Governor of the American College of Surgeons, and currently serves as Chairman of the Board of Directors of the North Carolina Institute of Medicine, President of the Medical Mutual Insurance Company of North Carolina, and Chairman of General Surgery of the Pan American Medical Association.

A native of North Carolina, Doctor Davis completed his undergraduate work at the University of North Carolina in 1940. He has served as President of the General Alumni Association and of the Medical Alumni Association. Both the School of Medicine and the General Alumni Association of the University have honored him with Distinguished Service Awards.

Doctor Davis received his M.D. degree from the University of Pennsylvania Medical School in 1943, and completed his internship and residency in surgery at the New York Hospital-Cornell University Medical Center. He is a Professor of Surgery at the University of North Carolina School of Medicine, Associate Professor of Clinical Surgery at Duke University School of Medicine, and former Chairman of the Department of Surgery at the Durham General Hospital.

He is a diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons.

He and his wife, Margaret, are the parents of two sons, Kenneth and George.

Doctor Davis is the author of many papers on topics of general and thoracic surgical interest and has written extensively on the subject of ambulatory surgery. He is author of the text, *Major Ambulatory Surgery* (1986), a member of the Editorial Board of the *Journal of Ambulatory Care Management*, and has served as Guest Editor, *Surgical Clinics of North America*.

May, 1987, WVSMA Speaker

Doctor Davis was a speaker for WVSMA's first leadership conference held last May in Charleston. With a meeting theme of "Taking Charge of Change," he discussed national issues changing medicine such as Health Policy Agenda, representation of foreign medical graduates in the AMA, AIDS, PROs, DRG reimbursement for radiologists,

anesthesiologists and pathologists (RAPS), and liability insurance.

Program Subject Areas

The scientific program being planned by the Program Committee, with speakers to be announced, will include AIDS, Controversial Procedures, Ethical Codes, and Cardiovascular Surgery. Other speakers will discuss A Defense Attorney's Perspective on Medical Liability and Marketing a Medical Practice.

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

Additional convention speakers, topics and plans will appear in upcoming issues of *The Journal.*

ABFP Launches New Academic Journal

The American Board of Family Practice (ABFP) and the Publishing Division of the Massachusetts Medical Society, publishers of the *New England Journal of Medicine,* announced the publication of a new quarterly journal entitled *The Journal of the American Board of Family Practice.* Volume 1, Number 1 appeared in January.

Paul R. Young, M.D. of Galveston, Texas, is serving as the Editor. G. Gayle Stephens, M.D., of Birmingham, Alabama is the Associate Editor, and Nicholas J. Pisacano, M.D., of Lexington, Kentucky, is the Executive Editor. Doctor Pisacano is also Executive Director of the American Board of Family Practice. The *Journal* will be purely academic and will not carry advertising during its first year.

The primary purpose of this journal is to publish original papers pertaining to clinical investigations, case reports, review articles pertinent to the specialty of family practice, editorial comments, and book reviews, the sponsors said. Relevant original papers pertaining to nonclinical subjects are also acceptable. The articles published are intended to provide new and reliable information for reference by the entire medical community, which is invited to send submissions for consideration to the ABFP, 2228 Young Drive, Lexington, KY 40505.

The *Journal* will be distributed free of charge to all diplomates of the ABFP, 2228 Young Drive, Lexington, Kentucky 40505. Subscriptions are available through Massachusetts Medical Society, The JABFP, Subscription Department, 1440 Main Street, Waltham, MA 02154.

Journal Manuscript Directions Revised

The Manuscript Information "box" for the guidance of contributors of scientific articles to *The Journal* has been revised (Page 21).

The directions have been expanded to make the method of preparing manuscripts more clear.

Authors should note that references in text now are made by arabic numerals in parentheses on the same line rather than by raising them above the line (superscript), which was previously specified. No other changes in "style" have been made.

The Journal style for scientific articles, with minor exceptions, is in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (International Committee of Medical Journal Editors).

"...Go on in there and take your clothes off... Doctor Orthman will see you tomorrow."

Poetry Corner

Psychotheraphy

I'm just a surgeon
I like to read
Sports Illustrated and
dance with my wife

They're the psychiatrists
the two of them
probably play the violin
father and son

The father is solid
he speaks English
and returns my calls
I just met the son

Same attentive attitude
a little more skittish
I was just making
conversation when I said

Your Dad's okay then
I stopped almost laughing
but no one could tell
thinking he's the psychiatrist

remembering my father
and the way it was
so I added

I don't know how you feel
about him and he said
Daddy's all right with me

I returned to my simple
thoughts but I could feel
him still thinking while I
wondered what I had done right

He grinned like the sun
rising over the bay and said
By the way
That's psychotherapy

Charles R. Joy, M.D.
Erie, Pennsylvania

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine for part of 1988, as compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Robert E. Kristofco, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Kristofco, (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

Marshall University

Feb. 13-14, Huntington, Conscious Sedations (ACLS)

Mar. 19-20, Huntington, Conscious Sedations (hands-on seminar)

Mar. 23, Huntington, Research Day

West Virginia University

Feb. 6-7, Issues & Controversies in Gastroenterology & Nutrition, Canaan Valley Ski Resort

Feb. 21-24, Snowshoe Rheumatology Conference, Snowshoe

Mar. 18-19, Living With Cancer

April 8, Hospital Ethics Committee in WV: A Symposium on Their Functions

April 19, Medical Examiners Conference

April 29, Internal Medicine Day

April 30-May 1, Clinical Workshops in Physical Therapy

CAMC/West Virginia University, Charleston Division

Feb. 8-10, Snowshoe, 7th Annual Cardiovascular Symposium

Mar. 18-19, AIDS Symposium

Mar. 25, Annual Newborn Day

Mar. 30, Research Day

May 5-6, Angioplasty Demonstration Course

May 20, Sexuality in the Spinal Cord Patient

June 4, Interventional Radiology

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center Morgantown

Brownsville, PA, Brownsville General Hospital, 1st and 4th Thursday, 11 A. M. to 1 P. M.—Feb 4, "Adult Onset Muscle Disease," Robert Ringle, M.D.

Feb. 25, "Dysmenorrhea," Donald Cox, M.D.

Fairmont, Fairmont Clinic, 3rd Wednesday, 12:30 P. M. — Feb. 17, "Death & Dying—Handling the Elderly Patient," Richard A. DeVaul, M.D.

Martinsburg, City Hospital, Special Lectures/Grand Rounds—Febuary (No Program)

Martinsburg, V.A. Medical Center, 1st Thursday, 2 P. M. — Feb. 4, "Psychologic Management of Grief & Serious Illness," Richard A. DeVaul, M.D.

New Martinsville, Wetzel County Hospital, 2nd Thursday, 12-1 P. M. — Feb. 11, "Immunologic Aspects of Cancer: Diagnosis & Treatment," Peter Raich, M.D.

Philippi, Broaddus Hospital, 2nd Thursday, 7-8 P.M.—Feb. 11, "Non-Parathyroid Hypercalcemia—Differential Diagnosis, Evaluation & Management," Irma Ullrich, M.D.

Uniontown, PA, Uniontown Hospital, Special Lectures—Feb. 24, "Advances in the Management of COPD," N. Leroy Lapp, M.D.

Waynesburg, PA, Greene County Memorial Hospital, 2nd and 4th Tuesday, 7-9 P. M. — Feb. 9, "Hypertensive Emergencies," Frank Oliver, M.D.

Feb. 23, "The Approach to the Child With Short Stature," Angel M. Vasquez, M.D.

Wheeling, Ohio Valley Medical Center, 2nd Wednesday, 8-9 A.M.—Feb. 10, "Plasma Cell Dyscrasias," Anthony J. Murgo, M.D.

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center-Charleston Division/CAMC

Beckley, Southern W. Va. Clinic, 4th Thursday, 5:30 to 7:30 P. M. — Feb. 25, "Organic Brain Syndrome," Sidney Lerfeld, M.D.

Cabin Creek, Cabin Creek, Medical Center, Dawes, 2nd Thursday, 8-10 A. M. — Feb. 11, "Movement Disorder," Glenn Goldfarb, M.D.

Gassaway, Braxton Co. Memorial Hospital, 1st Wednesday, 7-9 P. M.—Feb. 3, "Quinolones as the Antibiotic," Elizabeth Funk, M.D.

Greenbrier, Library, Greenbrier Clinic, 3rd Tuesday, 4-5 P. M. — Feb. 16 (No Program)

Madison, Boone Memorial Hospital Conference Room, 2nd Tuesday, 7-9 P. M. — Feb. 9, "Blood Component Therapy," Mary Taylor, M.D.

Oak Hill, Plateau Medical Center (Oyler Exit, N 19) 4th Tuesday, 7-9 P. M. — Feb. 23 (No Program)

Mar. 22, "Update: Neurology Surgery," John Schmidt III, M.D.

Summersville, Summersville Memorial Hospital, 1st Tuesday, 6:30-8:30 P. M. — Feb. 2 (No Program)

Welch, Stevens Clinic Hospital, 3rd Wednesday, 12 Noon-2 P. M. — Feb. 17 (No Program)

Whitesville, Raleigh-Boone Medical Center, 4th Wednesday, 11 A. M.-1 P. M. — Feb. 24 (No Program)

Williamson, Williamson Memorial Hospital, 1st Thursday, 6:30-8:30 P. M. — Feb. 4 (No Program)

Robert Guthrie, M.D.

Don Steinmuller. M.D.

State Family Physicians Announce April Assembly

State family physicians will get an update on the diagnosis and treatment of commonly encountered medical problems during their annual scientific assembly in Huntington April 15-17.

Some 17 physicians will be speakers for the 36th annual CME meeting of the West Virginia Chapter, American Academy of Family Physicians at the Radisson Hotel.

The scientific program, which is approved for 16 AAFP prescribed hours and for 16 hours by the American Medical Association, will begin Friday morning, April 15, and end at noon on Sunday.

Topics will include chronic pain, renal failure, AIDS, Alzheimer's disease, stroke, angina, dermatology, anxiety and depression, insomnia, and others.

Speakers

Speakers and topics will be:

Drs. Charles O. Shaughnessy, South Field, Michigan, "Chronic Pain"; Ernest Hodge, Cleveland Clinic and Charleston Area Medical Center, "Renal Failure and Transplantation"; Robert Guthrie, Columbus, Ohio, "Cardiovascular Management in Office Base Practice"; Richard J. Andrassy, University of Texas, "Medical Considerations for the Nutritional Management of GI Disorders in Patients";

Robert Walker, Huntington, "Non-Cardiac Causes of Chest Pain"; Bruce W. Dixon, Pittsburgh, "Sexually Transmitted Disease (AIDS), The Family Physician Role and the Impact on Patients and Community"; Thomas McGlynn, Hershey, Pennsylvania, "Clinical Disorders of the Bone"; Don Steinmuller, Cleveland Clinic, "Treatment of Essential Hypertension With Emphasis on Lipid Profile"; Claude Burton, Raleigh-Durham, North Carolina, "Management of Decubitus Ulcers";

William R. Hiatt, Denver, "Peripheral Vascular Disease—Diagnosis and Management in the Diabetic"; Stephen Scheidt, Cornell University, "Angina Update"; Marian E. Dunn, Brooklyn, New York, "Sexual Dysfunction"; Eric B. Zurbrugg, Chicago, "New Concepts in the Treatment of Seizures and Epilepsy"; William Patterson, Birmingham, Alabama, "Pain in Anxiety and Depression"; Joseph S. Sanfilippo, Louisville, Kentucky, "Transdermal Estrogen Osteoporosis"; and Gordon R. Bernard, Nashville, "Treating Respiratory Infections in the Office Base Practice."

Singer Jennings Scheduled

Country music singer Waylon Jennings will appear Friday evening at the Huntington Civic Center as part of the entertainment for the scientific assembly and as a benefit for the Family Medicine Foundation of West Virginia.

Special seating for all members, guests and exhibitors has been arranged through March 15, after which tickets will be available on a "first-come" basis. A percentage of the ticket sales will benefit the Foundation. Tickets are $15 each. A special guest artist to be announced also will appear.

For registration and additional information, contact West Virginia Chapter, AAFP, P. O. Box 7058, Cross Lanes, Charleston, WV 25356-0058. Telephone (304) 776-1178.

New WVU Faculty Member, Charleston

Dr. John M. Eckerd has joined the faculty of the WVU Medical Center, Charleston Division as Associate Professor and Director of Pediatric Cardiology, Department of Pediatrics.

The North Carolina native is a graduate of Duke University and the Wake Forest University's Bowman Gray School of Medicine. After residencies at the University of Kentucky's Medical Center and a fellowship at Duke Medical Center, he completed a service commitment at McConnell (Kansas) and Travis (California) Air Force bases.

Dr. James McJunkin, Director of the Pediatric Residency Program, said "Doctor Eckerd brings remarkable expertise in the evaluation and treatment of infants and children with cardiac disease."

Health Care Costs Seniors' Major Concern (AARP Survey)

More than 10.4 million Americans 45 and older have put off medical treatment in the past two years because of cost, according to a survey report just released by the American Association of Retired Persons (AARP). The majority of older Americans believe health care costs are beyond their control, the AARP said.

Even so, individuals 45 and older infrequently pursue cost-cutting measures. Only about one fourth of those surveyed have asked for second opinions or estimates on charges before receiving care. And few have investigated health care options such as health maintenance and preferred provider organizations.

The survey, completed for AARP by Hamilton, Frederick and Schneiders, Washington, D.C., involved interviews with 2,000 people 45 and older who commented on a wide range of health-related topics such as current health status, generic drugs, health care costs, nursing homes, and Medicare.

Although the survey results indicate most Americans 45 and older generally are satisfied with their personal health, the report identifies shortcomings in the current health care system.

The Medicare system received low marks in a number of areas, with most respondents holding negative opinions about the financial well-being of the government's health care program. Those in preretirement, particularly, believe Medicare will not be able to provide coverage necessary to meet their future health care needs.

When asked about specific Medicare concerns, respondents expressed the most dissatisfaction with the amount paid by Medicare and perplexity about what portions of a Medicare bill they have to pay, reflecting a general confusion with the system.

Furthermore, seven per cent, or nearly 1.3 million Medicare filers, have had their claims lost during the past two years. Nearly one fourth, or more than 4.2 million, have had to resubmit a Medicare claim to receive payment.

Additional Findings

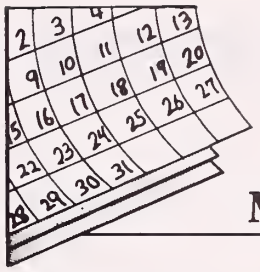
Additional findings that reflect the health care picture of Americans 45 and older are:

- Although 85 per cent of those surveyed know what a generic drug is, only 53 per cent make an effort to purchase it.
- Ten per cent of all respondents said either they or someone close to them has had difficulty gaining nursing home admission due to either lack of space or financial difficulties.
- While physicians talk to their patients about how and when to take a medication (74 per cent) and what a drug is supposed to do (58 per cent), less than half discuss precautions to take (47 per cent) or possible side effects (37 per cent).
- Respondents report physicians seldom or never discuss cost involved in their medical treatment (69 per cent).
- Many people are changing habits to improve their health, with about seven of 10 older Americans eating more nutritiously, and six out of 10 exercising more regularly.

The health care survey is part of a continuing effort by AARP to promote awareness of various health issues in its ongoing national health care campaign.

Copies Available

Single survey copies are available by writing: Health Care In America: Views and Experiences of Mature Adults (Stock No. D13070), AARP Fulfillment, 1909 K Street, N.W., Washington, D.C. 20049.



Medical Meetings

February

1-3—Southeastern Surgical Coinference, Lake Buena Vista, Fla.

17-21—Am. College of Psychiatrists, Tucson.

27—N. Am. Trauma Assoc., Snowmass Village, Colo.

March

2-6—Physicians for Social Responsibility, Washington, D.C.

3-6—Am. College of Physicians, New York.

20-23—Am. Society of Abdominal Surgeons, Williamsburg, VA.

23-26—Am. Burn Assoc., Seattle.

24-27—Am. Medical Student Assoc., Washington, D.C.

25-27—WV Urological Society Spring Seminar, Charleston.

27-31—Am. College of Cardiology, Atlanta.

April

15-17—WV Chapter, AAFP, Huntington.

16-21—College of Am. Pathologists, Kansas City Mo.

18-20—Am. Assoc. for Thoracic Surgery, Los Angeles.

19-24—Am. Assoc., Orthopaedic Medicine, Dallas.

24-27—WV Academy of Ophthalmology, 41st Annual National Spring Meeting, White Sulphur Springs.

30—Am. Diabetes Assoc., WV Affiliate, Inc., Wheeling.

May

1-5—Am. College of Obstetricians & Gynecologists, Boston.

5-7—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

11-14—Am. Pediatric Surgical Assoc., Tucson.

14-20—Am. Gastroenterological Assoc., New Orleans.

27-30—WV Academy of Otolaryngology, Head & Neck Surgery, White Sulphur Springs.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

WVU Medical Center News

West Virginia University

Compiled from material furnished by the Medical Center News Service, Morgantown, W. Va.

Weinstein Elected To Surgeons' Board

George W. Weinstein, Professor and Chairman of the Department of Ophthalmology, has been elected to the Board of Regents of the American College of Surgeons.

Doctor Weinstein was elected by the Board of Governors to the three-year term, and will work with 18 other regents to determine college policy.

"It is clear that Doctor Weinstein's colleagues in the national community have the same high regard for his leadership skills that we here at the Medical Center do," said Richard A. DeVaul, Dean of the WVU School of Medicine.

Doctor Weinstein has been Chair of the department of Ophthalmology since he came to WVU in 1980. Prior to that, he taught at Georgetown University, Johns Hopkins, and the University of Texas Medical School in San Antonio.

At WVU he holds the Jane McDermott Shott Chair of Ophthalmology. His professional interests include both medical and surgical aspects of ophthalmology and research into the nature of visual function, including color vision, visual acuity and electrical events of the eye and brain.

In 1986 he was selected President of the Association of University Professors of Ophthalmology.

Damage - Healing Process Good?

If you join a game of volleyball, softball, or tennis and haven't played the sport for years, you're a prime candidate for delayed-onset muscle soreness.

"Certain types of exercise produce delayed-onset muscle soreness. This occurs in muscles that perform unaccustomed activities or those involving deceleration of the body, such as jumping or running downhill," said William Stauber, Professor of Physiology and Neurology.

"The question now confronting the sports medicine community is whether this type of muscle injury is necessarily bad and should be avoided, or does it lead to a positive adaptation by the muscles to resist further injury."

A specialist in the cellular mechanism of muscular injury and repair, Doctor Stauber recently spoke on "Exercise-Induced Muscle Damage: Good or Bad?" at the national conference of the Australian Sports Medicine Federation.

Stauber said delayed-onset muscle soreness should not be confused with the acute pain experienced during fatiguing exercise. Delayed muscle soreness occurs 24 to 48 hours after performance of an unaccustomed activity—one not performed on a regular basis.

In early studies of the phenomenon using laboratory rats, scientists noted a three-part sequence of exercise-induced muscle damage—inflammation, then degeneration of the muscle and connective tissues, followed by regeneration of those tissues.

"The entire damage-healing process associated with muscle pain incurred from unaccustomed activity is seen elsewhere in the body," Doctor Stauber explained.

Recent studies indicate that it is very difficult to produce soreness a second time in the same muscles with the same activities.

"Either the muscle tissues adapt or the central nervous system controls the muscles in a different way to prevent injury," Doctor Stauber said.

"It appears that following very strenuous—or maximal effort—exercise, changes occur in muscle tissue, while after sub-maximal exercise the nervous system may play a greater role.

"This has brought us to the point of asking whether the entire repair process adds protection against further damage. The answer is that we think so but we don't know for sure.

Enzyme Oxidizer Mixed Blessing

If you've ever pumped gas at the service station and had it accidentally spill on your hands, you might have been exposed to some sinister compounds that could one day cause health problems.

"There's no way in the world you can avoid these substances in everyday life. The problem is that your body can't always oxidize these toxic substances effectively enough to provide for their safe removal from the body," said William Canady, Professor of Biochemistry.

Canady is currently conducting research on the hydrocarbons found in gasoline and other petroleum products. In addition to physical contact with gasoline or oil, potential methods of exposure include breathing polluted air, contact with evaporated hydrocarbons that return to earth in rain, and consumption of water from rivers, lakes, and other sources contaminated by petroleum products.

Canady is studying an enzyme found in the liver, adrenal gland, and other tissues, called Cytochrome P-450, which can oxidize hydrocarbons, making them more soluble in water and more easily removed from the body.

He said the oxidizing abilities of Cytochrome P-450 could be a mixed blessing. According to Canady, Cytochrome P-450 creates additional chemicals during its oxidation of hydrocarbons. Some of these new substances can react with other seemingly harmless chemicals to produce extremely toxic substances that are detrimental to the functioning of the human liver and may cause cancer.

"What you have is an enzyme that can activate other compounds that are not particularly harmful in themselves—but which, when they're oxidized, can be very toxic," Canady said.

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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Ob-Gyn Department Chairman Named

Dr. Berel Held of Houston, Texas, will become Chairman of the Department of Obstetrics and Gynecology, Dean Lester R. Bryant, M.D., has announced.

Doctor Held, 49, currently is a Professor of Obstetrics, Gynecology and Reproductive Sciences at the University of Texas Medical School at Houston.

"We are most fortunate to have a new Chairman of Doctor Held's skill and experience," said Doctor Bryant. "He brings considerable experience not only as a practicing physician but also as an administrator and a teacher.

"He has experience in running a residency training program and in developing and running a Department of Obstetrics and Gynecology, and this experience will be especially valuable to us," Doctor Bryant added.

The School of Medicine is in the process of revamping its OB/GYN Department after accreditation for the Department's residency program was withheld earlier this year.

Interim Visits

Although Doctor Held will not join the faculty full-time until this summer, he will in the interim make periodic visits to the campus and begin recruiting additional faculty members.

Doctor Held joined the University of Texas faculty in 1972 and was Chairman of the Department of Obstetrics and Gynecology from 1972 until 1983. Previously, he served on the faculty of the University of Florida College of Medicine in Gainesville.

He is a graduate of Tulane Medical School in New Orleans, and took postgraduate training at Harvard Medical School, Boston City Hospital, and the Charity Hospital of Louisiana.

Doctor Held is a consultant to the American Public Health Association, and serves on the test material development subcommittee for a national medical examination. He is President-Elect of the Houston Gynecological and Obstetrical Society and a member of the Committee on Maternal and Infant Mortality of the Harris County Medical Society. He is a former member of the National Perinatal Association's Executive Committee, as well as a past President of the Southern Perinatal Association and of the Texas Medical Association's Obstetrics and Gynecology Section.

From 1969 to 1972, he was Project Director of the North Central Florida Maternity and Infant Care Project, and also has served as Family Planning Coordinator for the State of Florida. In addition, he served on the advisory board for a regional training center for family planning.

Doctor Held is Editor of *Educational Reviews in Obstetrics and Gynecology,* and is an editorial consultant for the journals *Obstetrics and Gynecology* and *Practical Reviews in Medicine.*

A native of Brooklyn, Doctor Held is a former captain in the U.S. Air Force Medical Corps.

Marshall Approved For AOA Chapter

MU School of Medicine has been approved for a chapter of the medical honorary Alpha Omega Alpha, "the Phi Beta Kappa of medical education," Dean Lester R. Bryant, M.D., has announced.

The School was awarded the chapter following an AOA site visit in October.

"This is something every medical school strives for, and we're delighted to have earned this designation so early in our development," Doctor Bryant said. "Our site visitors were very impressed with the way our school is maturing. They were extremely complimentary of our programs and our emphasis on quality performance."

Dr. Charles E. Turner, an AOA member and a member of Marshall's volunteer faculty, will be the Councillor for Marshall's chapter, Beta of West Virginia.

The school plans a formal installation ceremony this spring, at which time the first members elected to the group will be announced.

Alpha Omega Alpha was created in 1902. Its goals are to promote scholarship, encourage high standards of character, and recognize high acievement.

Social Work Goes To Medical School

In a move to save and strengthen MU's Social Work Program, MU President Dale F. Nitzschke has announced an administrative realignment which includes placing the program in the School of Medicine's Division of Social Work in the Psychiatry Department.

Nitzschke expressed confidence that the new structure will enable the program to qualify for accreditation quickly.

"We believe it is essential that we do everything possible to save the program and improve it because of the great need for licensed social workers throughout southern West Virginia," he said. "By linking the social work program with the rural care mission of the School of Medicine, we have an opportunity to develop a unique program which may serve as a model to other institutions."

Three current Department of Psychiatry faculty members will assume additional responsibilities under the realignment. Binni Bennett, Associate Professor, will be Program Director; William Downs, Assistant Professor, will serve as Associate Director; and Elizabeth Devereaux, Associate Professor, will serve as Coordinator of Accreditation for the Program.

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Obituaries

RANDALL CONNOLLY, M.D.

Dr. Randall Connolly, Vienna family physician for more than 40 years, died December 8 in a Parkersburg Hospital. He was 79.

Doctor Connolly was President of the West Virginia Chapter, American Academy of Family Physicians, in 1962.

In 1957 he began medical hypnosis and became a recognized authority in the field.

Born in Richardson (Calhoun County), Doctor Connolly was graduated from Ohio University, and received his M.D. degree in 1941 from the Washington University of Medicine in St. Louis, Missouri. He interned at St. Joseph's Hospital in Parkersburg.

Doctor Connolly was a member of the AAFP and the American Society of Clinical Diagnosis, and an honorary member of the Parkersburg Academy of Medicine, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Eleanor Rector Connolly; one son, Terrance R. Connolly of Vienna, and one daughter, Maureen de Supinski of Arlington, Virginia. Other relatives are Mrs. Oris Bailey of Arnoldsburg and Mrs. Verbal Cunningham of Waterford, Ohio.

GENEVIEVE G. DUTTON, M.D.

Dr. Genevieve G. Dutton of White Sulphur Springs died December 13 in a Fairlea hospital. She was 82.

Doctor Dutton was a psychiatrist at Athens (Ohio) State Hospital for 12 years before going into private practice there. She retired in 1967, and had since lived in White Sulphur Springs.

She was a past President of the Athens County Medical Society and a past President of the Lewisburg Branch of the American Association of University Women.

Doctor Dutton, who was born in Fredericks Hall, Virginia, was graduated from West Virginia University, and received her M.D. degree in 1948 from the Medical College of Virginia. She interned at the Johnston Willis Hospital in Richmond, and completed her residency at Overlook Hospital in Summit, New Jersey.

She was an honorary member of the Greenbrier Valley Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are two nephews, Frank C. Garrett of North Fort Myers, Florida, and Thomas A. Garrett of Tervilians, Virginia.

HU C. MYERS, M.D.

Dr. Hu C. Myers, a co-founder of the Myers Clinic-Hospital in Philippi, died at his home there December 15. He was 85.

Doctor Myers, a surgeon, served two terms on the West Virginia State Medical Association Council, and was a past Chairman of the WVSMA Cancer Committee.

He retired in 1983.

In 1933, Doctor Myers and his late brothers, Dr. Karl J. Myers and Dr. Junior W. Myers, formed the Myers Clinic. When the clinic-hospital outgrew its space, Doctor Myers was instrumental in establishing a hospital on the Alderson-Broaddus College campus in Philippi where a school of nursing could be established. The school of nursing got under way in 1945.

In 1954, Broaddus Hospital was opened and the clinic expanded to occupy part of that building.

From 1968 through 1977, Doctor Myers, as Director, and his wife, Mrs. Avanelle Withers Myers, initiated and developed the Physician's Assistant Program at the college.

Doctor Myers was a former Chairman and member of the West Virginia State Board of Health, and was Chairman of its Advisory Board for 18 years. The Board honored him by naming the Region VII Health Center the "Hu Myers Region VII Health Center."

A Diplomate of the American Board of Surgery, he was past President of the West Virginia Hospital Association and the American Cancer Society, West Virginia Division, and received the Distinguished Service Award of the American Cancer Society, Citizen of the Year Award of the West Virginia Public Health Association, and the Gold Medal of the Southeastern Surgical Conference.

Doctor Myers was President of the Barbour-Randolph-Tucker County Medical Society (now Tygart's Valley Medical Society) in 1940.

Born in Nestorville, he was graduated from West Virginia University, and received his M.D. degree in 1927 from Emory University. He interned at Steiner Clinic, Grady Hospital, Atlanta, and at Georgia Baptist Hospital, Atlanta, served his residency at the latter institution, and completed postgraduate work at New York Post Graduate Medical School (Columbia University) and Harvard University.

Doctor Myers was the author or co-author of some 40 scientific articles, many of which concerned the physician's assistant program. His book, *A Baccalaureate Curriculum for the Physician's Assistant,* was published in 1978.

Outside the United States, he lectured on scientific topics in Guatemala, Bolivia, Dominican Republic, Colombia, and Austria.

He was an honorary member of the Tygart's Valley Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving in addition to the widow is one son, Robert L. Myers of Hawaii.

WILBUR F. SHIRKEY, JR., M.D.

Dr. Wilbur F. Shirkey, Jr., of Charleston, retired ear, nose and throat specialist, died December 20 at his home. He was 96.

Doctor Shirkey started practice in Charleston in 1918 with his father, Dr. Wilbur F. Shirkey. Five of the elder Shirkey's children became doctors.

He was chief of staff at the former Charleston General and Kanawha Valley hospitals in Charleston, retiring in 1965.

At age 94, he was honored by his alma mater as the oldest living graduate of the West Virginia University School of Medicine.

Born in Malden (Kanawha County), Doctor Shirkey was graduated from WVU, and received his M.D. degree in 1916 from the University of Maryland. He interned at Harper Hospital in Detroit and served his Residency at Columbia University.

Doctor Shirkey was an honorary member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

ROY R. SUMMERS, M.D.

Dr. Roy R. Summers, retired Charleston surgeon, died December 13 in a hospital there. He was 86.

Doctor Summers was Director of the West Virginia University Student

(Continued on Page 45)

County Societies

McDOWELL

A Christmas party was held by the McDowell County Medical Society December 12 at Raymond's in Welch.

The Society elected 1988 officers.—
R. O. Gale, M.D., Secretary

MINGO

The Mingo County Medical Society met December 9 at Williamson Memorial Hospital.

The Society discussed the problem of preferential choosing of a physician by the United Mine Workers of America.

Members were encouraged to attend the January Mid-Winter Clinical Conference in Charleston.—Diane E. Shafer, M.D., Secretary-Treasurer.

MONONGALIA

The Monongalia County Medical Society met December 1.

Speakers were Bernard Westfall, President, WVU Hospitals, Inc., and Dr. John Jones, Vice President, Health Sciences, WVU Medical Center.

A motion to approve the formation of a political action committee was approved and referred to Council for further action.

The society approved a dues increase to $85 from $40, and elected 1988 officers.—Robert L. Murphy, Executive Secretary.

PARKERSBURG ACADEMY

Dr. Marc Shabot was the guest speaker for the meeting of the Academy of Medicine of Parkersburg December 9 at the Parkersburg Country Club.

Doctor Shabot, Associate Professor of Medicine at the University of Texas, Galveston, spoke on "Peptic Ulcer Disease."

The Academy declined to endorse the program of a Pennnsylvania clinical laboratory, which comes to the Parkersburg Senior Citizens Center, draws blood and then asks physicians to sign forms stating that the patient is in good health on the basis of the laboratory work. A letter concerning this also will be sent to the West Virginia Board of Medicine.—R. C. Sims, M.D., Secretary-Treasurer.

TYGART'S VALLEY

The Tygart's Valley Medical Society met November 19 at the Elkins Motor Lodge.

The guest speaker was Merwyn G. Scholten, Executive Director of the West Virginia State Medical Association, who discussed professional liability insurance and tort reform. He also covered the WVSMA legislative package and urged local physicians to contact their legislators.

The Society approved the formation of an AIDS committee.—Michael M. Stump, M.D., Secretary.

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The following physicians were welcomed in December as new members of the West Virginia State Medical Association.

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Ernest C. Faig, M.D., The Greenbrier Clinic, White Sulphur Springs 24986, Internal Medicine

Kanawha

R. David Allara, M.D., 1306 Kanawha Boulevard, East, Charleston 25301, Ophthalmology

Susan L. Cavender, M.D., 1115 Lee Street, East, Charleston 25301, Family Practice

Brad R. Cohen, M.D., 3100 MacCorkle Avenue, SE, Charleston 25304, Radiation/Oncology

Gregory Mark Moreland, M.D., 1901 19th Street, Nitro 25143, Family Practice

Parkersburg

David Byler, M.D., Lafayette Street, St. Marys 26170, Family Practice

Ernest Miller, D.O., 6000 Grand Central Avenue, Vienna 26105, Family Practice

Wyoming

Ciriaco Mendoza, M.D., #1 Poplar Grove States, Princeton 24740, Family Practice

Residents

Richard Paul Anderson, M.D., 505 Jefferson Street, Morgantown 26505

Stewart James Callis, M.D., PO Box 1424, Morgantown 26505

Judie F. Charlton, M.D., Dept. of Ophthalmology, WVU Medical Center, Morgantown 26506

Robert T. Gallaher, M.D., #6 Gloucester Court, Barboursville 25504

John A. Leon, M.D., 1332 Pine View Drive #18, Morgantown 26505

Patricia A. Sebas, M.D., Dept. of Pediatrics, 1801 6th Avenue, Huntington 25701

Students

Jeffrey Allan Ballard, Apartment 1, 437 Inglewood Boulevard, Morgantown 26505

Demir E. Bastug, Apartment 6, 881 E. Everly Avenue, Morgantown 26505

David C. Beckner, 974A Northwestern Avenue, Morgantown 26505

Cheryl L. Belknap, 149 Bradley Street, Morgantown 26505

Gregory Kittredge Bell, 1542 Spring Valley Drive, Huntington 25701

Jeffrey Brian Betts, 4217 Magazine Avenue, Huntington 25704

Edward L. Birdsong, 512-B Jefferson Street, Morgantown 26505

Frances Mae Blake, PO Box 4024, Star City 26504

Bernard R. Borbeley, 1064 Van Voorhis Road, J-107, Morgantown 26505

T. Glen Bouder, PO Box 35, 989 Maple Drive, Morgantown 26505

Vincent J. Caruso, PO Box 14, WVU Medical Center, Morgantown 26506

Clark E. Childers, Jr., 6032 Hubbards Branch Road #401, Huntington 25704

Carolyn Anne Cline, 5745 Shawnee Drive, Huntington 25705

Carolyn A. Costa, 300 Scott Avenue #7, Morgantown 26505

Elizabeth Dianne Cox, Route 3, Box 145, Clarksburg 26301-9545

Pacita A. David, 1812 Garfield Avenue, Parkersburg 26101

Barry Scott Eskins, Apartment 1, 466 Inglewood Boulevard, Morgantown 26505

Melissa J. Gamponia, 1234 Van Voorhis Road, C-1, Morgantown 26505

Phillip B. Hall, 3646 Collins Ferry Road, Morgantown 26505

Deborah A. Harper, Apartment 102, 6026 Hubbards Branch Road, Huntington 25704

Jay Matthew Hayner, Apartment 404, 6032 Hubbards Branch Road, Huntington 25704

David E. Hess, Lot 640, Independence Hill, Morgantown 26505

Lisa Beth Hughes, Apartment 14, 884 E. Everly Street, Morgantown 26505

Joseph Jarrell, Jr., Route 1, Box 341, Morgantown 26505

William Randolph Jeffrey, 1616 Spring Valley Drive, Huntington 25704

Sherry Annette Keiter, 58 Kingwood Street, Morgantown 26505-6054

Avinash Singh Khatter, PO Box 47, WVU Medical Center, Morgantown 26505

Jack L. Kinder, Jr., Apartment A-405, 6032 Hubbards Branch Road, Huntington 25704

Alan M. Lintala, PO Box 1523, Morgantown 26505

Iva Elaine Moore, 2800 Hart Street #8, Charleston 25304

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Gabriele Lewis Salamie, PO Box 8476, South Charleston 25303

Sanjay Sandhir, Apartment 1, 466 Inglewood Boulevard, Morgantown 26505

Christopher A. Schlarb, Apartment 103, 777 Chestnut Ridge Road, Morgantown 26505

Jeffrey S. Schmidt, Apartment 4, 105 29th Street, Charleston 25304

John Paul Schultz, PO Box 79, WVU Medical Center, Morgantown 26505

Timothy Edward Shiben, PO Box 82, WVU Medical Center, Morgantown 26505

Troy Donald Sommerville, Unit 4, 2800 Hart Street, Charleston 25304

Thomas W. Steele, 803 Alpine Street #13, Morgantown 26505

Debra Ann Stein, PO Box 1543, Morgantown 26507-1543

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Nancy A. Sukys, PO Box 84, WVU Medical Center, Morgantown 26505

Michael J. Thomas, Apartment 18, 1325 Perry Avenue, Morgantown 26505

Beverly P. Uniacke, 1439 15th Street, Huntington 25701

Sue Ann Westfall, Apartment K309, 1056 Van Voorhis Road, Morgantown 26505

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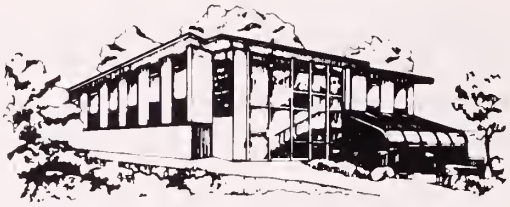

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Health Service from 1932 to 1941 when he entered private practice in Charleston.

He was a member of the West Virginia State Medical Association Council in 1953-54, and a Senior Fellow of the South Eastern Surgical Conference.

Born in Walton (Roane County), he was graduated from WVU, and received his M.D. degree in 1927 from the Medical College of Virginia. He interned at the former Mountain State Hospital in Charleston.

Doctor Summers was an honorary member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are the wife, Mrs. Helen Crichton Summers, and a sister, Mrs. Clinton McCrary of Charleston.

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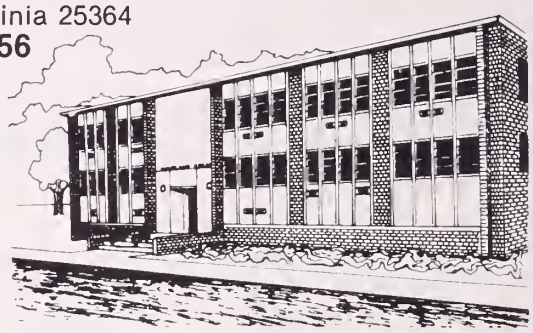

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
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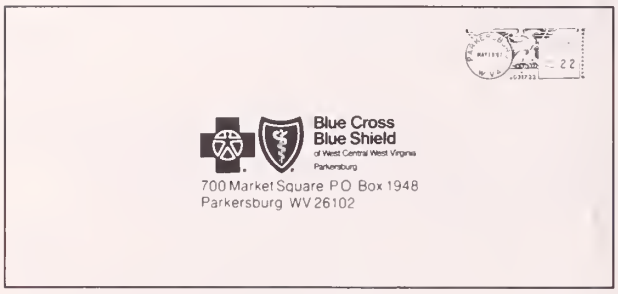

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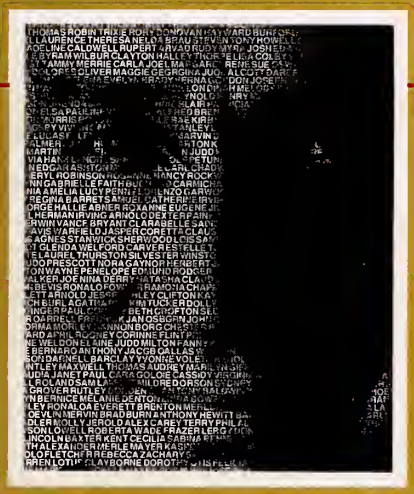

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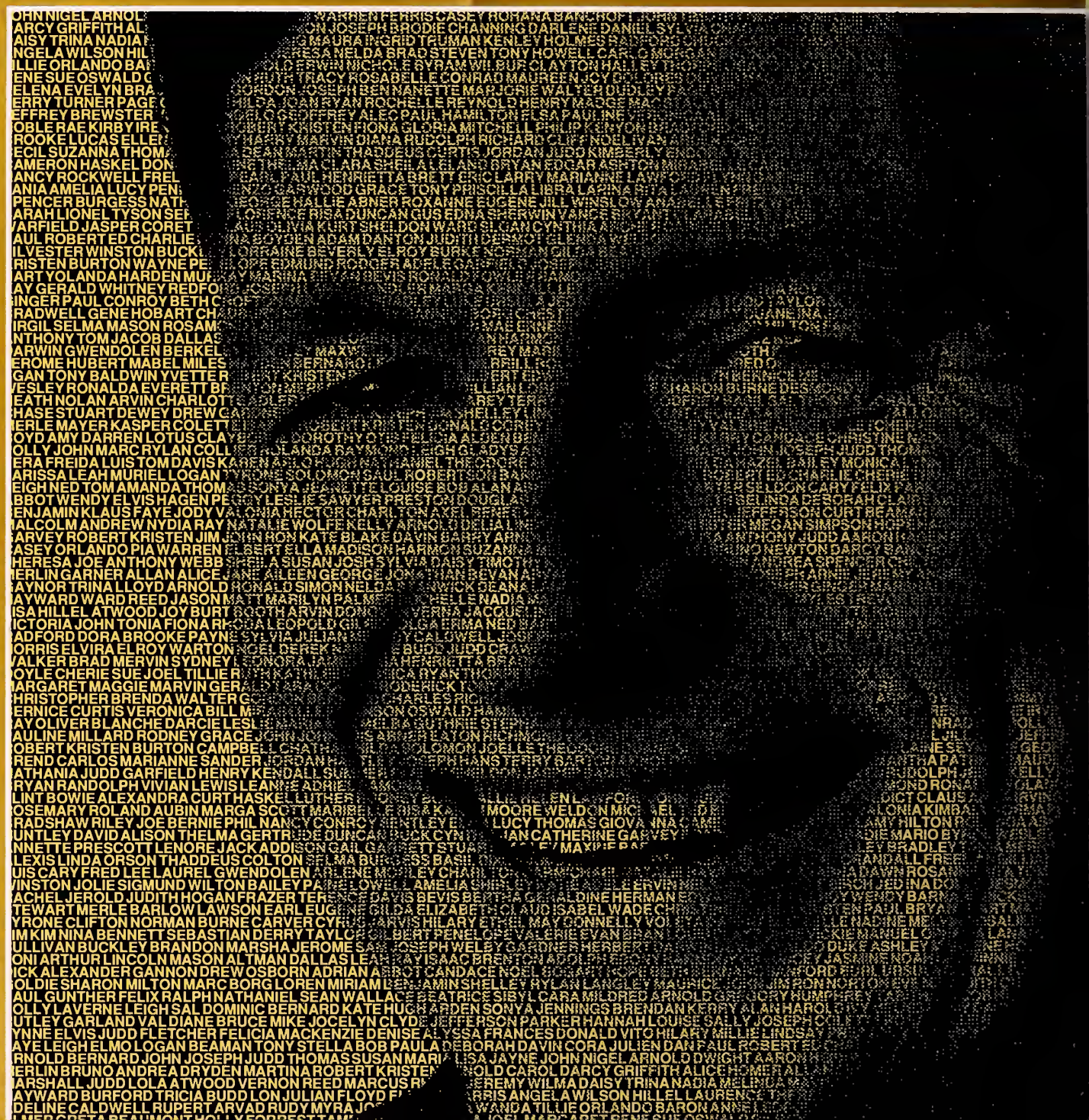

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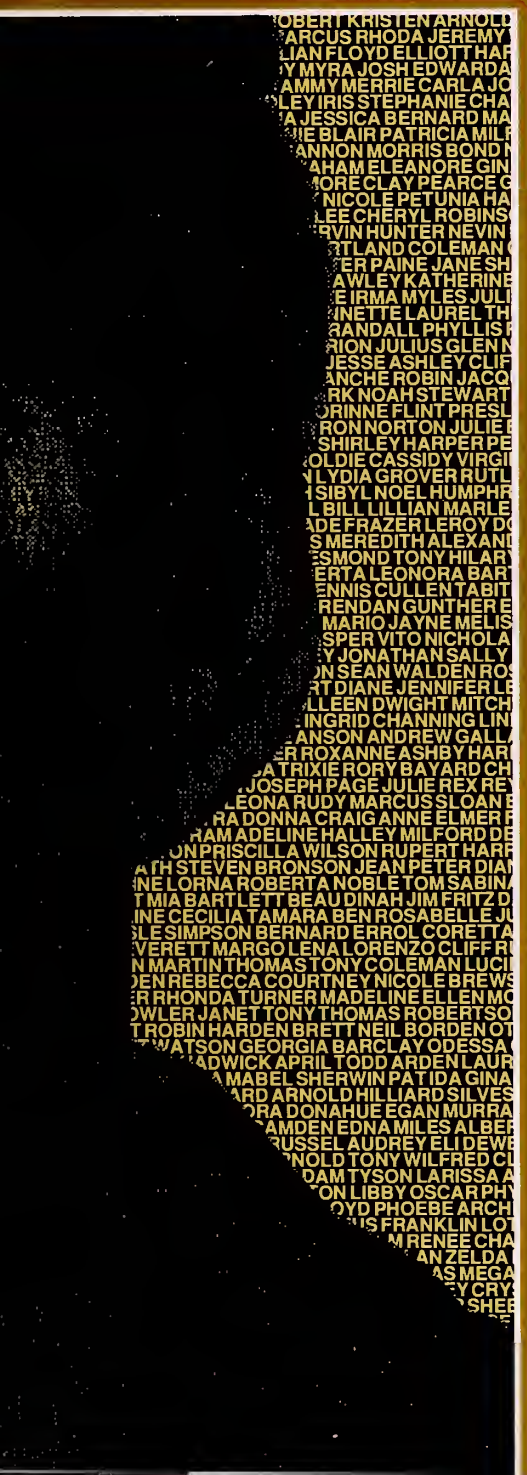

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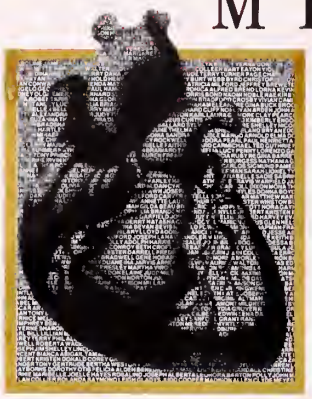

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Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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Bactrim™ Pediatric

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ROCHE®

Please see summary of product information on following page.

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BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides, documented megaloblastic anemia due to folate deficiency, pregnancy at term and during the nursing period, infants less than two months of age.
WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.
BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS: *General.* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (*e.g.*, elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.
Use in the Elderly. May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, *e.g.*, impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).
Use in the Treatment of Pneumocystis Carinii *Pneumonitis in Patients with Acquired Immunodeficiency Syndrome (AIDS).* Because of unique immune dysfunction, AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonitis reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.
Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
Laboratory Tests. Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.
Drug/Laboratory Test Interactions. Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.
Carcinogenesis, Mutagenesis, Impairment of Fertility. Carcinogenesis. Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis.* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility.* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy. Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use. Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**
Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN. *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired.* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS. Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).
STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE. PROTECT FROM LIGHT. STORE SUSPENSIONS AT 15°-30°C (59°-86°F). PROTECT FROM LIGHT.

PI 0586

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Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, New Jersey 07110

CARAFATE®
(sucralfate)

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:
1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

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KANSAS CITY MO 64137

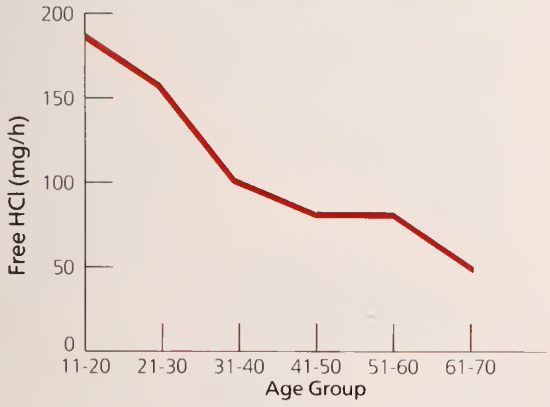
1594H7

Specialized ulcer therapy

When advancing age signals reduced acid secretion

If your duodenal ulcer patient is over 55, decreased mucosal resistance is more likely to cause an ulcer than hypersecretion of acid-pepsin.[1] A tendency toward lower acid secretion with advancing age has been shown.[2,3]

Declining gastric secretion and age[3]



CARAFATE® (sucralfate/Marion) makes sense as initial ulcer therapy for the elderly. Carafate provides ulcer healing rates comparable to H_2 antagonists without the risk of systemic side effects or drug interactions—an important benefit for older patients.

The unique, nonsystemic action of Carafate enhances the body's own ulcer healing ability, strengthening the mucosal structure as it protects damaged tissue from further injury.

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Please see adjoining page for references and brief summary of prescribing information.

1595H7

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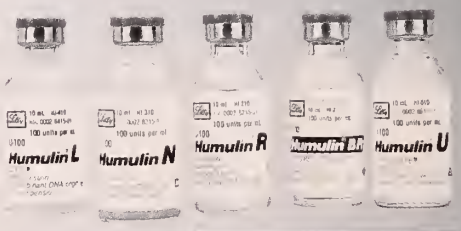
And no wonder. Humulin is identical to the insulin produced by the human pancreas—except that it is made by rDNA technology.

Humulin is not derived from animal pancreases. So it contains none of the animal-source pancreatic impurities that may contribute to insulin allergies or immunogenicity.

The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente®, etc), species/source (beef, pork, beef-pork, or human), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.



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849313

YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

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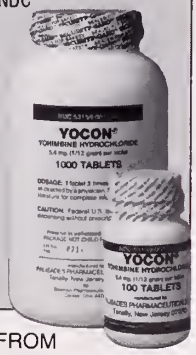

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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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West Virginia Organ Procurement

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A West Virginia-based organ procurement agency was started in July, 1986. From July 1, 1986, to June 30, 1987, 48 organ donor calls were received and 15 consents were obtained. Thirteen viable whole-organ donor surgeries were performed, and 26 kidneys, four livers, three hearts, and one heart-lung were retrieved, for an extrarenal-to-renal donor ratio of 46 per cent (6/13). Five local patients were transplanted at West Virginia University with kidneys supplied by the organ procurement agency during this time period; all five are dialysis-free four to five months after transplantation. Local patients waited one to 92 days (mean 42.2 days) for a kidney.

The development of organ procurement services in West Virginia coincides with the initiation of renal transplant services in the state. Public and professional support is needed to continue this service in the climate of changing federal legislation.

Introduction

The Mountain State Organ Procurement Agency (MSOPA) was formed in 1986 as an independent organ procurement agency with the primary purpose of supporting kidney transplantation in West Virginia. The Presidential task force on organ transplantation has declared cadaveric organs to be a national resource, to be used for the benefit of those patients suffering from organ failure (1). Independent organ procurement agencies support the transplant programs in their geographical service areas, and work closely with the respective transplant physicians. Recent federal legislation has created a national network for organ sharing, and mandated membership in this organization for all independent organ procurement agencies.

In an effort to promote organ transplantation the task force recommended passage of standard brain death and routine inquiry laws. The brain death law allows recognition of patients who have suffered irreversible brain injury, and thus makes it possible to identify beating-heart cadaveric donors. Beating-heart cadaveric donors generally have well preserved organ perfusion and function, which improve the results of whole-organ transplantation. The generally accepted criteria for brain death are shown in Table 1. West Virginia passed a brain death law in 1980 (HB#16-10-2).

The West Virginia routine inquiry law (HB 1323) stipulates that hospitals should have organ donor policies in place. The policies required are: 1) designation at each hospital of a person to ask the next-of-kin of each potential organ donor for consent for an anatomical gift unless against the stated wish of the family, 2) documentation of the request for organ donation whether affirmative or negative. Both the Joint Commission for Accreditation of Hospitals (JCAH) and Medicare will require participating hospitals to have such organ donor policies in place as a requirement for reimbursement after March 31, 1988.

TABLE 1
Brain Death Criteria

Irreversible cessation of all functions of the entire brain, including the brain stem manifested by:
- —coma in the absence of:
  - sedation
  - hypothermia
  - neuromuscular blockade
  - shock
- —absent cranial nerve reflexes
- —apnea
- —confirmatory tests
  - flatline EEG
  - absent cerebral blood flow

TABLE 2
Services Provided by MSOPA

- Hospital development
  - Assisting hospitals in developing organ donor policies
    - Training personnel for required request
  - Developing written affiliation agreements
  - Assisting organ donor councils
    - Reviewing organ procurement efforts
- Organ donor referral services
  - Evaluating potential organ donors
  - Discuss organ donation with next-of-kin
    - Assist with obtaining informed consent
  - Obtain medical examiners release
  - Manage organ donors after declaration of brain death
  - Arrange donor surgery
  - Organ preservation and disposition
  - Interface with national transplant registries (UNOS)
- Identify and pay charges associated with organ donation
- Educational services
  - Professional education/inservices
  - Public education

The role of an organ procurement agency includes promoting organ donation through professional and public education. This includes programs which assist hospitals in developing organ donor policies. The primary purpose of an organ procurement agency is to provide organ procurement services throughout its geographical area. The variety of services available through MSOPA are shown in Table 2. Organ procurement coordinators are based in Morgantown and Charleston.

Organ Procurement Activity

In the period from July 1, 1986, until June 30, 1987, 48 potential organ donors were evaluated. Fifteen consents were obtained for organ dona-

tion. A total of 15 donor surgeries were performed with retrieval of 26 kidneys, four livers, three hearts, and one heart-lung. Of 13 donors coming to whole-organ donor surgery, six were multiple-organ donors for an extrarenal donation rate of 6/13. In addition, four hearts were retrieved for valves, one in a donor with non-viable whole organs, and one donor was suitable only for tissue donation. Most surgeries were performed through a total midline incision, with *in situ* cold intracellular electrolyte solution flush (Collins' 2 or Eurocollins). Kidneys were preserved by ice-cold simple storage.

Results

A total of seven patients received renal transplants at West Virginia University from April 12, 1987, until June 30, 1987. Five of these kidneys were supplied by the MSOPA. The average cold storage time (time from retrieval until completion of vascular anastomosis) for kidneys supplied by MSOPA and transplanted at WVU was 22 hours and one minute (range 18 hours, 55 minutes to 26 hours, 56 minutes), and four of five kidneys had immediate function (no dialysis required in the first week after transplantation). The fifth patient was off dialysis by the second week after transplantation.

Twenty kidneys were exported for transplantation at other centers. Followup is available for 19 of the exported kidneys, and 17 of the 19 kidneys exported are known to have functioned. The two kidneys which failed to function came from a donor with a history of hypertension.

One kidney was discarded because of injury to an unrecognized upper pole anomalous renal artery. An additional donor was operated upon with the intent to retrieve kidneys, but became asystolic and donor nephrectomy was aborted.

Extrarenal organs were shared on the basis of local and regional recipient need and availability of the extrarenal retrieval team. Potential recipients are identified through a national registry of patients which is kept by the United Network for Organ Sharing (UNOS) where patients are stratified by need.

Kidneys were offered first to patients on the West Virginia transplant waiting list, and then to local and national registries. The medical criteria used for kidney assignment prior to October 1, 1987 are shown in Table 3.

TABLE 3

Criteria for Kidney Placement Prior to October 1, 1987

- ABO blood group compatibility (required)
- Negative T-cell crossmatch (required)
- Per cent reactive antibody against HLA-antigens
- Length of time on local waiting list
- HLA-antigen compatibility
- Other factors such as time constraints or patient size

Discussion

Approximately 8,000 patients per year are waiting for kidney transplants in the United States. Since only about 6,000 cadaveric kidneys are made available each year, about 2,000 live-related kidney donations are required annually to meet the need for kidneys. While the results from living-related renal transplants (approximately 92 per cent one-year patient and graft survival) are better than those from cadaveric renal transplantation (approximately 80 per cent one-year patient and graft survival), live-related kidney donation does subject the donor to the pain and attendant risks of surgery.

The shortfall of organs is particularly acute for those with extrarenal organ failure who die if a heart or liver cannot be found. The shortage of organs makes the proper allocation of this local and national resource an extremely important consideration. Ethical and moral considerations mandate equal access for all potential recipients. The shortage of organs could be overcome if more of the potential cadaveric donor pool (24,000/year) came to actual organ donation (3,000/year).

The Presidential task force recommendation was that at least 20 per cent of all donors for a given independent organ procurement agency be multi-organ donors. MSOPA's 46-per cent incidence of multi-organ donation far exceeds the recommendations and the national average.

National guidelines for organ sharing became effective October 1, 1987.

TABLE 4

Point System for Kidney Sharing After October 1, 1987

Selection criteria	Points
Time waiting	0-10
Antigen match	0-12
Antibody sensization (PRA)	0-10
Urgency (rarely applies to kidneys)	0-10
Logistical score	0-6

Patients from all approved transplant centers are now listed on a national computer registry. O blood type kidneys are shared nationally so that O kidneys are transplanted into O recipients.

All kidneys with six antigen HLA matches also must be shared nationally. Local and extrarenal sharing will be based on a point system. The point system for kidneys is shown in Table 4. ABO blood group compatibility and a negative crossmatch are prerequisites, and the patient with the most points will be offered a kidney. Since one of the criteria for kidney placement is length of time on given centers' waiting list, newer transplant programs such as those in West Virginia will be at a disadvantage until their patients have been listed longer. Increased donation will help the supply of cadaveric kidneys meet the local demand.

Summary

The creation of a West Virginia-based organ procurement agency has provided high-quality kidneys for local transplantation and has shared organs regionally and nationally. We hope that the availability of the agency will increase organ donation in West Virginia, and invite all West Virginia hospitals to participate with the agency. The federal government has established minimum performance and service area requirements for organ procurement agencies. The Mountain State Organ Procurement Agency hopes to meet these requirements within the next two years.

Donor referral and public and professional education programs are available through MSOPA, which can be reached in West Virginia by toll free number, 800 634-4414.

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Hypergonadotropic Hypogonadism Secondary To Classical Galactosemia

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Premature loss of functioning follicles or the presence of follicles that are insensitive to gonadotropin stimulation are causes of hypergonadotropic hypogonadism. The following case report describes a patient with premature ovarian failure in association with classical galactosemia. The accompanying review of the literature summarizes the proposed etiologies for this metabolically induced loss of ovarian function.

Introduction

Amenorrhea is a common gynecologic complaint, but provides a diagnostic challenge due to the multiplicity of potential etiologies. The classification of amenorrhea as being primary or secondary is based upon the presence or absence of previous menses. In the absence of pregnancy, the failure to withdraw to a progestin challenge suggests either a hypoestrogenic state or an outflow tract obstruction. When the evaluation of amenorrhea documents a hypoestrogenic state in the face of elevated serum gonadotropins (follicle stimulating hormone, luteinizing hormone), the patient is classified as having hypergonadotropic hypogonadism.

The following case study and discussion describe an unusal etiology for premature loss of ovarian function.

Case Report

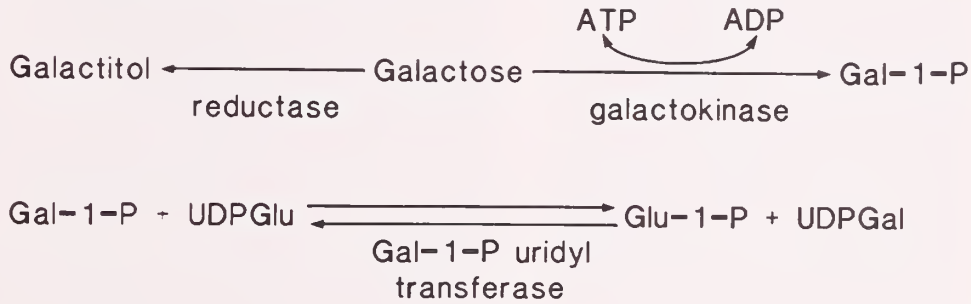
The patient is a 19-year-old, white, nulligravida referred to West Virginia University Hospital for evaluation of secondary amenorrhea. Her medical history is significant for classical galactosemia, with subsequent cataract formation. The galactosemia was diagnosed at five weeks of age and was controlled with a galactose-free diet. Physical and mental development were otherwise normal, as evidenced by the fact that at the time of presentation she was a college sophomore, majoring in business. Thelarche and pubarche began at age 13, with menarche at age 16. Menses have always been irregular at two-week to nine-month intervals. Prior laboratory workup by the referring physician included: FSH 64.8 miu/ml, prolactin 14.1 ng/ml (4-21 ng/ml), testosterone 11 ng/dl (15-100 ng/dl), DHEAS 389 mcg/dl (70-350), TSH 2.2 miu/ml (0.5 miu/ml).

The patient presented to WVUH in July, 1985, with the above history and an essentially normal general physical examination. Pelvic examination revealed a small, anterior uterus, and the ovaries could not be palpated. Laboratory evaluation at WVUH showed: FSH 120.8 miu/ml, LH 68.3 miu/ml, estradiol 16 pg/ml.

Discussion

The finding of hypergonadotropic hypogonadism implies the absence of responsive ovarian follicles. This lack of responsive follicles may be due to follicle depletion as seen in dysgenetic gonads, other chromosomal abnormalities (Trisomy X), autoimmune disorders, congenital thymic aplasia, infectious agents (viral), environmental exposure to radiation or chemical toxins, or unknown reasons as seen in idiopathic premature ovarian failure. Although follicles may be present, they may not respond to endogenous gonadotropins. The presence of non-responding follicles is seen in the resistant ovary syndrome (apparently due to a granulosa cell receptor defect) and in 17-hydroxylase deficiency which results in the failure of conversion of C-21 precursors to sex steroids.

Our patient is an example of hypergonadotropic hypogonadism due to classical galactosemia, a condition in which there is a disorder of the enzyme galactose-1-phosphate uridyl transferase (Figure 1). Transferase deficiency results in an accumulation of galactose-1-phosphate and galactitol in many tissues. The previously recognized potential sequelae of this enzyme deficiency include mental retardation, cataracts, hepatosplenomegaly, and renal tubular dysfunction. It recently has been recognized that hypergonadotropic hypogonadism is a common finding in females



Gal-1-P: Galactose-1-Phosphate
UDPGlu: Uridine diphosphoglucose
Glu-1-P: Glucose-1-Phosphate
UDPGal: Uridine diphosphogalactose

Figure 1. Galactose Metabolism.

afflicted with classical galactosemia (1). A second type of galactosemia due to galactokinase deficiency has also been described (Figure 1). The kinase deficiency leads to accumulation of galactose and galactitol but not galactose-1-phosphate. This type of galactosemia has not been found to result in hypergonadotropic hypogonadism (2).

The definitive mechanism by which galactosemia leads to hypergonadotropic hypogonadism remains unanswered. The extent of ovarian dysfunction and the age at which the symptoms become apparent is variable, as is evidenced by the fact that some patients fail to develop secondary sex characteristics while others are able to become pregnant and bear children.

Chen et al. propose that galactosemia results in a toxic effect upon the follicle (3). This impres sion is based on the findings of a study in which rats were exposed to a 50-per cent galactose diet. These rats subsequently developed cataracts and liver abnormalities reminiscent of galactosemia in humans. In addition, there was an 80-per cent decrease in the number of small ovarian follicles in those rats which had been exposed to a 50-per cent galactose diet both pre- and post-natally as compared to those rats which had been exposed to this diet only during the postnatal period. The finding of a decreased number of morphologically normal primary follicles at the time of an ovarian biopsy in a 16-year-old with galactosemia and hypergonadotropic hypogonadism led Robinson et al. to propose that galactose had a similar toxic local effect upon ovarian follicles in humans (4). Laparoscopic findings of bilateral streak ovaries and absent fallopian tubes in a patient with classical galactosemia led Hoefnagle et al. to propose a similar toxic effect upon the reproductive tract (5). Levy argues against a toxic effect upon the follicle in that autopsy results revealed normal folliculogenesis with abundant oocytes in a five-day-old galactosemic infant who died of sepsis (6). This infant's mother had received a normal diet throughout her pregnancy thereby having exposed the infant to galactose throughout the prenatal period.

Defect Theories

Consideration has been given to a local toxic effect of galactose upon the gonadotropin receptor (1). It would seem logical, however, that the receptors must have been normal at one time since many of these patients have had development of normal secondary sexual characteristics and, in some cases, have achieved pregnancy. In order to explain these findings, it has been suggested that the mechanism and timing of receptor damage may be variable and, if occurring late, would allow the development of secondary sexual characteristics and pregnancy.

An alternative theory is that the defect is not at the level of the follicle but is due to defective gonadotropins (7). This theory has been postulated since the carbohydrate moiety of the gonadotropin molecule contains galactose and galactosamine. Again, the development of secondary sexual characteristics and pregnancy would suggest the presence of normal gonadotropins. Additional evidence against the presence of defective gonadotropins is the fact that gonadotropins from galactosemic patients have been found to have normal biologic activity when assayed by the mouse-uterine-weight method (1).

"The definitive mechanism by which galactosemia leads to hypergonadotropic hypogonadism remains unanswered."

An autoimmune process has also been postulated but antiovarian antibodies have not been demonstrated in galactosemic females (1).

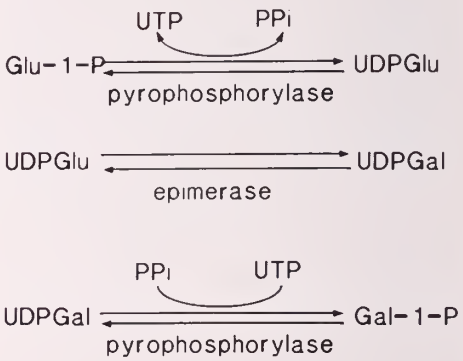
Of the above proposed mechanisms, a direct toxic effect of galactose and its metabolites upon the ovary after ovarian differentiation and initiation of folliculogenesis seems most likely.

When a transferase deficiency is diagnosed early in life and the patient is treated with a galactose-restricted diet, there is a resulting diminution in the severity of observed sequelae (8). It generally has been found that those patients with normal ovarian function have been treated with a galactose-free diet earlier than their counterparts who developed premature ovarian failure (1) but dietary restriction may not be sufficient to preclude ovarian failure. One reported galactosemic patient never exposed to galactose, either in utero or after birth, still manifested hypergonadotropic hypogonadism, as did her sister who had not been diagnosed as having galactosemia until nine days of age (9).

The current belief is that such patients may have endogenous production of galactose from glucose through the epimerase-mediated and pyrophosphorylase-mediated pathways (10,11) (Figure 2). Such self-intoxication due to variable rates of conversion of glucose to galactose would then explain the observed differences in the age of onset of ovarian failure (10).

Severity Reduced

Strict dietary restrictions in the pregnant patient with galactosemia, and early diagnosis and therapy of the affected newborn have reduced the severity of most of the sequelae of galactosemia. It should be recognized that premature ovarian



Gal-1-P: Glucose-1-Phosphate
UDPGlu: Uridine diphosphoglucose
UDPGal: Uridine diphosphogalactose
GAl-1-P: Galatose-1-Phosphate

Figure 2. Autointoxication Pathway.

failure will occur in a high proportion of females with classical galactosemia despite adequate dietary management. This potential for premature ovarian failure necessitates careful counselling of the patient's parents as well as careful monitoring of sexual development during adolescence. If there is a failure to develop secondary sexual characteristics or secondary amenorrhea, and the patient is found to have hypergonadotropic hypogonadism, sex steroid replacement therapy should be instituted. When sexual development and menstrual function are normal and there is a desire for childbearing, an undue delay in attempting pregnancy should be discouraged.

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Serologic Diagnosis Of Viral Hepatitis: An Update

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In the setting of acute hepatitis with elevated serum transaminase levels, an adequate screening examination should include IgM anti-HAV, HB_sAg and IgM anti-HB_c. Monospot and CMV antibodies should be obtained in the appropriate clinical setting.

In chronic type B infections, clearance of HB_sAg and the appearance of anti-HB_s should be monitored. IgM anti-HB_c can be used in a variety of clinical settings in both acute and chronic HBV infections. HB_eAg and the conversion to anti-HB_e are useful in assessing disease activity and infectivity in chronic HB_sAg-positive individuals.

In fulminant, acute type B infections or rapid deterioration of previously stable HB_sAg carriers, HDV should be considered and HDA_g and anti-HDV obtained. NANB hepatitis remains a diagnosis of exclusion. CMV and EBV hepatitis should be suspected if atypical lymphocytes are seen on the blood smear.

A summary of the serologic findings in viral hepatitis is listed in Tables 1 and 2.

Introduction

Viral hepatitis remains a major health hazard worldwide, currently ranking third in the number of new cases reported yearly to the Center for Disease Control. It may be caused by a variety of agents which produce clinically indistinguishable syndromes that vary widely in their course, prognosis, and management approaches by physicians. Over the last few years a number of serologic markers have been described which can be used in most cases to identify accurately the causative virus(es). The growing complexity of these serologic tests, however, often makes their interpretation difficult. This article briefly summarizes the major types of viral hepatitis and reviews the current literature on the use of these serologic markers in the management of these diseases.

Hepatitis A

Hepatitis A virus (HAV) can be detected in stool and liver samples of infected patients but attempts at diagnosis in this manner are difficult, unreliable, and impractical. Fortunately, sensitive and specific radioimmunoassays for total and class-specific antibodies to HAV are widely available. False positives are rare. IgM anti-HAV typically becomes detectable in serum at the onset of symptoms, reaches its peak in one to two months, and is replaced by IgG anti-HAV within three to six months (Figure 1). IgG anti-HAV generally persists for life. The finding of IgM anti-HAV in a clinical setting consistent with type A hepatitis is virtually diagnostic of the disease. It has recently been reported, however, that IgM anti-HAV may remain positive for longer than 200 days (up to 420 days) in as many as 13.5 per cent of patients with HAV infections. It is therefore conceivable to have a hepatitis unrelated to HAV in a patient who remains IgM anti-HAV positive from a distant type A infection. This should be considered if the clinical course is atypical for hepatitis A or if chronic hepatitis results.

A positive serum IgG anti-HAV indicates ony a past exposure to HAV with current active immunity. The time of the initial infection cannot be determined. The presence of IgG anti-HAV during an acute episode of hepatitis in the absence of IgM anti-HAV is evidence that hepatitis A virus is not the causative agent.

Hepatitis B

Hepatitis B virus (HBV) currently infects an estimated 200,000,000 people worldwide to produce a wide spectrum of acute and chronic liver disease. A complex system of serologic markers for HBV infection

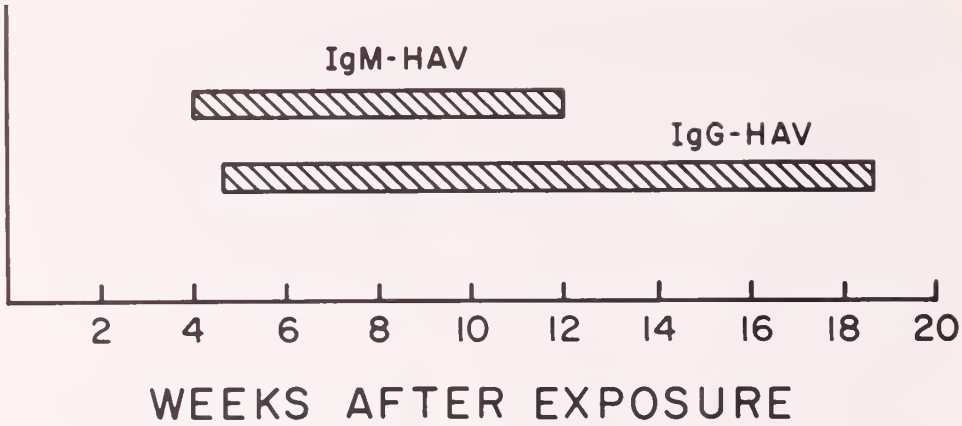

Figure 1. Serologic markers in acute hepatitis A.

has been discovered to diagnose and follow the course of the disease. A brief discussion of the most clinically useful tests follows.

Hepatitis B Surface Antigen (HB_sAg, Australian Agent)

HB_sAg is the major component to the outer shell of the HBV virion. HB_sAg is detectable by radioimmunoassay and more recently by using monoclonal antibody assays which are highly sensitive for the antigen.

Anti-Hepatitis B Surface Antigen (Anti-HB_s)

A positive serum anti-HB_s indicates resolution of infection and immunity to reinfection with HBV. It appears in the serum after the clearance of HB_sAg. In cases of chronic HBV infections it may not appear at all. Approximately 10-40 per cent of chronic HB_sAg carriers, however, will simultaneously test positive for HB_sAg and anti-HB_s. The anti-HB_s in these cases is invariably of low titer, and represents antibody directed against HB_sAg subgroups not present in the infecting HBV virion. Additionally, five to 15 per cent of patients never produce anti-HB_s despite complete recovery from disease and normal clearance of the HB_sAg. Anti-HB_s detection tests are available commercially both by radioimmunoassay and passive hemagglutination.

Hepatitis B Core Antigen (HB_cAg)

HB_cAg is a part of the inner nucleocupsid core of the HBV virion. It is detectable by immunofluorescence in the nuclei of infected hepatocytes (4). Tests for HB_cAg are not useful clinically and not commercially available.

Anti-Hepatitis B Core Antigen (Anti-HB_c)

Anti-HB_c arises just before the onset of symptoms in HBV infections and persists for a long time. Initially both IgM and IgG antibody classes are produced. Following recovery, IgM usually disappears from the serum within three to 12 months while IgG titers increase. In chronic HBV infections, however, IgM anti-HB_c may persist in low titers as long as disease activity continues. Recent studies have shown IgM anti-HB_c to be an extremely useful marker of infection in a number of clinical situations:

a) In high titer, it indicates recent infection with hepatitis B virus. During the so called "window" period (after the clearance of HB_sAg and before the production of measureable anti-HB_s) it may be the only serologic marker for disease. This is of particular importance in the 10 per cent of patients who have rapid clearance of surface antigen and are already HB_sAg negative by the onset of symptoms.

b) In HB_sAg positive individuals with elevated serum aminotransferases, IgM anti-HB_c may distinguish between acute disease (high titer IgM anti-HB_c) and chronic disease or reactivation states (low titer IgM and anti-HB_c); likewise, the absence of IgM anti-HB_c in this setting suggests some cause other than HBV for the ongoing disease activity (i.e. toxins, non-A non-B, A, EBV, or delta superinfection).

c) In chronic hepatitis B infection the titer of IgM anti-HB_c tends to correlate with disease activity. Clearance of IgM anti-HB_c usually predicts remission of active infection with subsequent normalization of serum enzymes.

d) IgM anti-HB_c in low titer may be detectable in chronic infections even in the absence of HB_sAg and serve as the only marker to suggest HBV as the etiologic agent, leading to reclassification of infections previously thought secondary to non-A non-B hepatitis.

Hepatitis B_e Antigen (HB_eAg)

HB_eAg is found exclusively in HB_sAg positive individuals, and its presence in the serum indicates a high level of viral replication. Though it has been shown to have no prognostic significance in early HBV infection, it is useful as a marker of disease activity and infectivity in chronic states (13,14). Its presence, for example, in pregnant women who are HB_sAg carriers predicts a high profitability of fetal infection with HBV.

Anti-Hepatitis B_e Antibody (Anti-HB_e)

Anti-HB_e is of little usefulness in acute type B hepatitis where it rarely reaches high titer. In chronic HB_sAg-positive states, the seroconversion from HB_eAg positive to anti-HB_e occurs at a rate of 2.7-25 per cent per year and indicates cessation of active viral replication. Recent investigations have shown, however, that chronic HBV hepatitis may continue to be active even after the appearance of anti-HB_e.

DNA Polymerase (DNAP)

Used in research as a marker of disease activity, tests for DNAP are difficult to perform, not available commercially, and probably less sensitive than other serologic markers of viral replication (HB_eAg, HBV-DNA). It has no widespread clinical usefulness.

Hepatitis B Virus DNA (HBV-DNA)

HBV-DNA can be detected in serum and liver tissue of HBV-infected individuals by *in vitro* hybridization techniques. It may

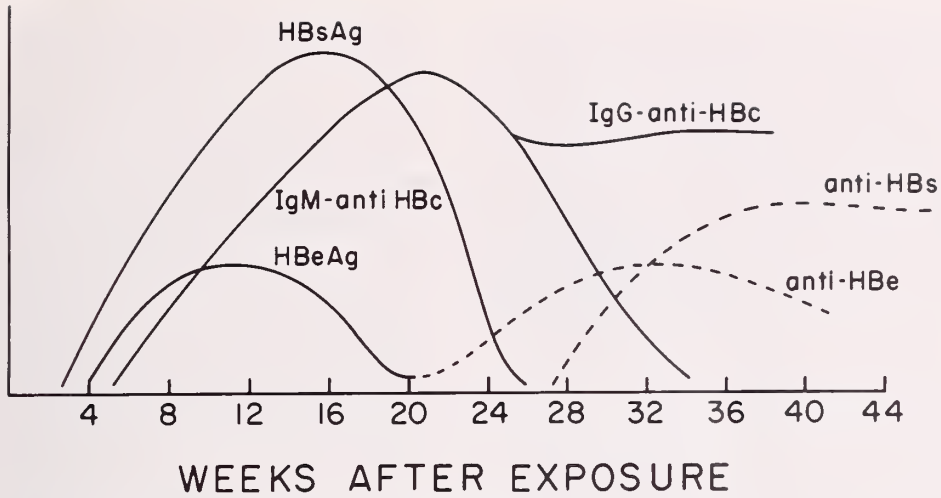

Figure 2. Serologic markers in acute hepatitis B.

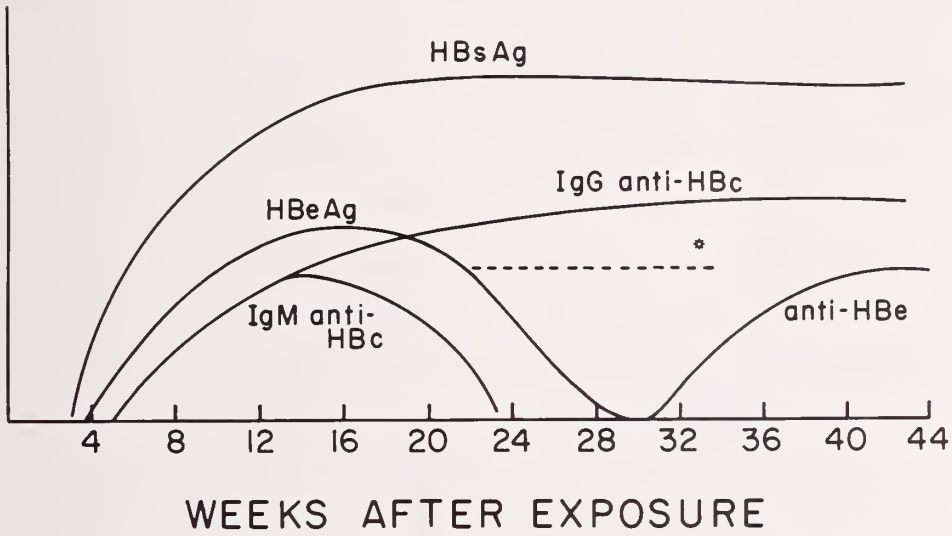

Figure 3. Serologic markers in chronic hepatitis B. *HBeAg may persist for a long time (see text).

be the most sensitive marker of active HBV replication, and has been used to demonstrate HBV as the causative agent in chronic active hepatitis in patients who were HBeAg negative. Its place in clinical medicine will be more clearly defined with further investigation.

Acute Type B Hepatitis

Figure 2 demonstrates the typical serologic course in acute, uncomplicated hepatitis B. HBsAg usually appears in the blood prior to the onset of symptoms and persists into convalescence. In the appropriate clinical setting, the presence of HBsAg is generally sufficient to establish the diagnosis of acute type B hepatitis. An IgM anti-HBc in high titer will rule out the possibility of an unsuspected chronic HBsAg carrier presenting with an acute hepatitis from an unrelated source. A positive IgM anti-HBC will also be diagnostic if the patient presents in the window period after the clearance of HBsAg and before the rise in anti-HBs. HBeAg appears with HBsAg and is usually cleared at about the peak of the serum aminotransferase levels. As noted previously, its presence early in the course of disease has no predictive value. A percentage of patients with acute hepatitis B, however, will be HBsAg positive for up to four months after the onset of symptoms, raising concern that they may proceed to a chronic HBV infection. A negative serum HBeAg in this setting suggests that viral replication has ended and HBsAg will eventually clear.

Chronic Type B Hepatitis

About 10 per cent of adults infected with HBV will not clear HBsAg within six months. Figure 3 demonstrates the typical serology in chronic HBV infections. The initial rise in antigen levels is identical to that seen in acute hepatitis B but the antigenemia persists without appropriate antibody response. Fifty to ninety per cent of patients will convert from HBeAg positive to anti-HBe at a rate of 2.7 to 25 per cent per year. Usually this seroconversion is accompanied by a loss of the other markers of disease activity (HBV-DNA, IgM anti-HBc, DNAP), a drop in serum aminotransferase levels, stabilization clinically, and a low probability of infectivity. These "healthy" HBsAg carriers will then clear HBsAg at a rate of approximately one per cent per year.

Delta Agent (Type D) Hepatitis

Initially described in 1977, hepatitis D virus (HDV) is a defective, single-stranded RNA virus obligatorily dependent upon the helper functions of HBV for its infectivity, pathogenesis, and ability to replicate. The virus consists of a genome and inner protein (HDAg or Delta Ag) encapsulated by a cast of HBsAg. It is invariably pathogenic but can only infect HBsAg-positive individuals, either by simultaneous or near simultaneous HDV-HBV infection or by superinfection of a chronic HBsAg carrier state. In simultaneous infection, HDV antigenemia and subsequent development of anti-HD may or may not be detectable depending upon the severity and duration of infection. In HDV superinfection in a chronic HBsAg carrier, anti-HD is usually detectable early in the course. In the setting of sudden deterioration of a previously stable HBsAg carrier, HDV should be considered and these serologic markers obtained when they become commercially available in the United States.

Non-A, Non-B Hepatitis (NANB)

Despite more than 10 years of research, non-A, non-B hepatitis

TABLE 1
Serologic Markers in Acute and Chronic Viral Hepatitis

	HB_sAg	*Anti-HB_c*		*Anti-HAV*		*HB_eAg*	*Anti-HB_s*	*Anti-HD*
		IgM	*IgG*	*IgM*	*IgG*			
Acute B	+	+	–	–	–	+	–	–
Acute B	–	+	–	–	–	–	–	–
Chronic B	+/–	–	+	–	–	+/–	–	–
Acute A	–	–	–	+	–	–	–	–
Acute NANB	–	–	–	–	–	–	–	–
Acute D	+	–/+	+/–	–	–	+/–	–	+

TABLE 2.
Serologic Markers in Acute CMV and EBV Hepatitis

	*VCA***						*CMV-SA**
	IgM	*IgG*	*EA-D*	*EA-R*	*EBNA*	*Monospot+*	*IgM*
EBV	+	+	+	–	–	+	–
CMV#	–	–	–	–	–	–	+

** See text for abbreviations
* SA: Specific antibodies
\+ Negative in 10-20%
\# Diagnosis can be made also by using serial CMV antibody titers or virus culture (see text).

remain a poorly defined entity. Evidence suggests the existence of at least two blood-borne agents that produce the disease, and a separate endemic water-borne NANB hepatitis has been described in Asia and Northern Africa.

Serologically, NANB hepatitis continues to be a diagnosis of exclusion. Over 40 reports of specific tests for NANB hepatitis have been published, but none has been found to be reproducible or adequately sensitive, specific, and practical for clinical use. Indirect assays including an elevated ALT or positive anti-HB_c in donor blood have been shown to increase the risk of transmitting NANB in transfusions, but no specific serologic marker of infection has been identified. Diagnosis depends on ruling out hepatitis A, B, Epstein Barr virus, Cytomegalovirus drugs and other known causes of hepatitis. In HB_sAg carriers, reactivation of hepatitis B or superinfection with HDV should also be considered before the diagnosis of NANB can be made.

Infectious Mononucleosis

Epstein Barr Virus (EBV), the causative agent for infectious mononucleosis (IM), is a member of the herpes virus family and has been linked with both Burkitt's lymphoma and nasopharyngeal carcinoma. Clinical jaundice is seen in approximately five per cent of cases of IM.

In the West, 80 per cent of the population is seropositive by age 20. Transmission of infection is via saliva and requires close contact. The infection is usually asymptomatic in childhood, and most symptomatic patients are over 20 years of age. Patients over 30 years have more severe disease and may present with atypical features including a higher incidence of associated hepatitis and jaundice and less adenopathy and sore throat.

Biochemically, most patients with hepatitis tend to have aminotransferase levels less than 1000 IU/L. Both alkaline phosphatase and gammaglutamyl transpeptidase (GGT) levels are higher than what is usually seen in hepatitis A, B, NANB, and reflect the cholestatic nature of the disease.

The diagnosis is made by serologic evaluation. If the monospot test is positive, and the clinical picture is compatible, no further evaluation is needed. Monospot can be negative early in the illness and if the titers are low (20 per cent of patients). A high-titer IgM-anti-VCA (viral capsid antigen) with absent Epstein-Barr early antigen nuclear abstract (EANA) is diagnostic of acute EB virus infection. A single high-titer IgG-anti-VCA is not enough to make the diagnosis unless a convalescent sample shows a rising titer.

Cytomegalovirus Hepatitis

Cytomegalovirus (CMV) is a herpes virus. Mild, self-limited hepatitis is seen with acquired infection. Rarely, CMV infection can present with liver disease. Seroepidemiologic studies have shown that antibody prevalence ranges from 30-80 per cent of the population and depends largely on age. CMV can be transmitted by blood transfusion, perinatal and sexual transmission. Diagnosis can be made by isolation of virus from a variety of sites. Urine is the preferred specimen.

Primary infection is also diagnosed by seroconversion, which is demonstrated by the appearance of IgG antibodies in a convalescent serum taken four weeks after the onset of illness. The appearance of CMV-specific IgM antibodies by solid-phase radioimmunoassay can be used also to diagnose primary infection if only one serum sample is available. Recurrent infections can be detected reliably by virus isolation. IgM antibodies are not produced in immunocompetent patients with recurrent infections while approximately one third of renal transplant patients produce specific IgM antibodies with recurrent infection. Liver involvement is seen in congenital infection in the newborn and in acquired infection in children and adults. Most acquired infections are asymptomatic. Rarely, infections can be associated with a mononucleosis-like picture. Monospot test is negative. Clinically, the hepatitis is mild.

Very rarely, cases of chronic CMV hepatitis and fatal hepatic necrosis have been described. These probably represent either B or NANB infection. CMV can also be transmitted by blood transfusion. The course is usually benign. CMV hepatitis is common on post-transplant patients. The diagnosis is usually made by culture of CMV from urine and blood and, when possible, serologic evidence of seroconversion. Biochemically, there is mild elevation of serum aminotransferase, alkaline phosphatase and gamma glutamyl transpeptidase level (GGT). Serum aminotransferase level is rarely, if ever, above 1000 IU/L.

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West Virginia Business And Labor Survey

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There appears to be considerable room for expansion of employee health, safety and wellness programs in West Virginia.

Introduction and Methods

A mailed survey, co-sponsored by the Health Care Coalition of West Virginia, Inc., and West Virginia University's Department of Community Medicine, was conducted in early 1987. Questionnaires were sent to the 2,000 largest employers in the state, excluding educational establishments and units of state government, as identified by Dun and Bradstreet. Questions were asked about health benefits offered to employees, wellness programs in place or planned, and health services made available.

Since only a single mailing could be undertaken, the response rate was low: 34 per cent of the largest employers (those with over 500 employees) and 12 per cent of those with 100 to 499 employees responded. None of the 500 smallest employers responded. The overall response rate from the 1,500 largest was 10 per cent. Comparatively speaking, there was over- representation in the responses from larger establishments and medical care establishments.

Findings

Despite the low response rate, there were findings of general interest. The respondents' distribution by size and by work activity are shown in Table 1.

Health and Safety Programs

First, almost half of the employers offered no health and safety programs to their employees. There was a marked gradient by size, with the larger employers typically providing such programs, and the smaller ones typically not. By place of work, retail and wholesale establishments and banks were most likely to offer no programs (79 per cent and 67 per cent, respectively). Over half of the employers with 200 or more employees offered at least one lifestyle program; over half of employers with 500 or more employees offered at least one counselling program and at least one safety program, but few companies offer cancer screening. Medical care establishments were the ones most often offering lifestyle and cancer screening programs; energy companies most often offered counselling services, and these two groups most often offered safety programs. Retail and wholesale businesses offered no lifestyle programs, banks offered no safety programs, and neither banks, retail and wholesale establishments nor state and local agencies offered any cancer screening.

When individual lifestyle, counseling, safety and cancer screening programs are considered, the two large company categories dominated the provision of programs (Table 2). The 500-to-999-size establishments had the highest proportion of the lifestyle programs, and the larger (1000+ employees) establishments had the highest proportion with other programs. The first five of the programs, along with hypertension and cancer, were most often offered by the medical care establishments (Table 3), and the stress reduction and psychological counseling by the state and local agencies (many of which were community mental health centers).

Alcohol and drug abuse programs were offered most often in the energy companies. Safety programs were most often provided in medical care establishments and energy companies. Offices, banks and retail and wholesale companies offered comparatively few programs of any kind.

Health Benefits

Health benefits were offered to 97 per cent of full-time employees but less than one per cent of part-time

TABLE 1
Respondents' Places of Work*

WV Dept. of Employment Security Count	Employees			B	C	D	F	H	I	J
25	1000 +	(13)	52%**	1	5	4	1	-	2	-
49	500-999	(12)	24%	3	4	2	1	-	-	2
102	200-499	(23)	23%	4	2	5	6	3	2	1
446	100-199	(40)	9%	5	14	3	3	4	6	5
808	50-99	(39)	5%	4	11	-	3	8	6	7
34,181	50	(23)	.007%	2	9	1	1	-	4	6
		(150)		19	45	15	15	15	20	21

*B: Hospitals, Nursing Homes and Clinics
C: Manufacturers
D: Energy Companies (Coal, Gas, Oil, Electricity)
F: Offices
H: Banks
I: Retail and wholesale
J: State and local services (All at the local level)
**Proportion of the respondent companies of the total number of Department of Employment Security count in WV

TABLE 2
Health and Safety Programs Offered by Size of Company*

Type of Program	1	2	3	4	5	6	Total
	(13)	(12)	(23)	(40)	(39)	(23)	(150)
Smoking Cessation	5 (38%)	5 (42%)	7 (30%)	2 (5%)	3 (8%)	-	22 (15%)
Physical Fitness	3 (23%)	5 (42%)	6 (26%)	2 (5%)	4 (10%)	2 (9%)	22 (15%)
Weight Control	4 (31%)	5 (42%)	3 (13%)	-	4 (10%)	1 (4%)	17 (11%)
Nutrition Program	3 (23%)	3 (25%)	-	1 (3%)	2 (5%)	1 (4%)	10 (7%)
Healthy Lunches	3 (23%)	3 (25%)	-	3 (8%)	3 (8%)	2 (9%)	14 (9%)
Stress Reduction	4 (31%)	4 (33%)	5 (22%)	3 (8%)	3 (8%)	1 (4%)	20 (13%)
Psychological Counseling	7 (54%)	5 (42%)	5 (22%)	6 (15%)	5 (13%)	4 (17%)	32 (21%)
Alcohol and Drug Abuse	9 (69%)	6 (50%)	8 (35%)	7 (18%)	5 (13%)	1 (4%)	36 (24%)
Hypertension Screening	5 (38%)	3 (25%)	1 (4%)	3 (8%)	5 (13%)	2 (9%)	19 (13%)
Accident Prevention Education	11 (85%)	3 (25%)	4 (17%)	10 (25%)	6 (15%)	2 (9%)	36 (24%)
CPR	8 (62%)	6 (50%)	7 (30%)	11 (28%)	4 (10%)	2 (9%)	38 (25%)
Cancer Screening	4 (31%)	2 (17%)	2 (9%)	3 (8%)	1 (3%)	-	12 (8%)

*See Table 1 for coding.

TABLE 3
Health and Safety Programs Offered by Place of Work*

Type of Program	B	C	D	F	H	I	J	Total
	(19)	(45)	(15)	(15)	(15)	(20)	(21)	(150)
Smoking Cessation	6 (32%)	7 (15%)	1 (7%)	4 (27%)	1 (13%)	-	2 (10%)	22 (15%)
Physical Fitness	5 (26%)	3 (7%)	1 (7%)	3 (20%)	3 (20%)	-	7 (33%)	22 (15%)
Weight Control	5 (26%)	5 (11%)	-	1 (7%)	2 (13%)	-	4 (19%)	17 (11%)
Nutrition Program	4 (21%)	3 (7%)	-	1 (7%)	-	-	2 (10%)	10 (7%)
Healthy Lunches	9 (47%)	3 (7%)	-	-	-	-	2 (10%)	14 (9%)
Stress Reduction	5 (26%)	5 (11%)	-	3 (20%)	1 (7%)	-	6 (29%)	20 (13%)
Psychological Counseling	4 (21%)	12 (26%)	5 (33%)	2 (13%)	2 (13%)	1 (5%)	6 (29%)	32 (21%)
Alcohol and Drug Abuse	5 (26%)	13 (28%)	7 (47%)	3 (20%)	2 (13%)	1 (5%)	5 (24%)	36 (24%)
Hypertension Screening	7 (37%)	9 (20%)	1 (7%)	2 (13%)	-	-	-	19 (13%)
Accident Prevention Education	8 (42%)	14 (30%)	8 (53%)	2 (13%)	-	2 (10%)	2 (10%)	36 (24%)
CPR	9 (47%)	14 (30%)	7 (47%)	1 (7%)	-	-	7 (33%)	38 (25%)
Cancer Screening	5 (26%)	4 (9%)	1 (7%)	2 (13%)	-	-	-	12 (8%)

*See Table 1 for coding.

employees. Of the total number of employees in these establishments, 17 per cent had no health benefits. Since it is generally conceded that large companies provide better employee benefits than smaller companies, this comparatively large proportion is a matter of concern.

Analysis has not been conducted on the extent of coverage in those with health benefits.

Availability of Health and Safety Personnel

Physicians play only a small role with the responding places of employment. Excluding hospitals and other health care establishments, only five had full-time physicians; all had at least 1,000 employees; four were manufacturing companies and one an office. Six had physicians, part-time, who visited the plant; all of them were manufacturing companies. Only seven had contractual arrangements with physicians to see employees in their offices on a regular basis; three were manufacturing companies, three energy companies and one retail establishment.

Nurses also play a small role. Excluding the health care establishments, only 19 of the 150 had any nurses. These were RNs or RNs assisted by LPNs. The larger companies were over-represented, and most nurses worked in manufacturing companies.

Twelve companies employed industrial hygienists; eight employed them full-time, two part-time, and two had a hygienist on contract. Twenty-three companies employed safety engineers, 20 of them on a full-time basis.

Sixty-eight places of employment had health and safety committees: almost all of those with 500 or more employees, about half of those with 100-499 employees, and about one quarter of the small companies. The health care establishments had the highest proportion followed by the energy companies and manufacturers; none of the banks and few of the retail or wholesale establishments had such committees.

Types of Health Service Offered

A) Physical examinations

Preemployment examinations are typically mandatory at health care establishments, manufacturing companies and energy companies but not at other places of work (Table 4). The larger the company the more likely it is for examinations to be amandated. Physician examinations after work absence due to illness or injury are less often mandated but

TABLE 4
Physical Examinations of Employees, by Place of Work

	Total	B	C	D	F	H	1	J
	(150)	(19)	(46)	(15)	(15)	(15)	(19)	(21)
(E_1)=Preemployment examination mandatory	61	15	22	13	3	3	2	3
(E_2)=Preemployment examination optional	4	--	-1	--	-1	--	2	--
(E_3)=MD examination after illness or injury, mandatory	39	7	15	9	2	2	2	2
(E_4)=MD examination after illness or injury, optional	10	2	4	3	1	--	--	--
(E_5)=Regular (annual) examinations, mandatory	27	10	9	3	--	2	1	2
(E_6)=Regular (annual) examinations, optional	10	4	2	1	2	--	1	--

TABLE 5
Companies by Place of Work and Types of Health Services Offered

	Total	B	C	D	F	H	1	J
	(150)	(19)	(46)	(15)	(15)	(15)	(19)	(21)
Audiometry	32	1	19	8	3	--	--	1
Pulmonary Function	13	--	9	2	1	--	--	1
Chest X-Ray	23	8	11	2	--	--	--	2
Blood Pressure	29	7	13	2	4	--	--	3
Electrocardiogram (ECG)	13	2	7	3	1	--	--	--
Blood Chemical Profiles	18	4	10	1	1	--	--	2
Biological Monitoring*	16	4	9	2	1	--	--	--
Other	11	3	2	2	2	1	--	1

*For toxic substances or radiation.

but are mandated by the same groups. Regular, often annual, examinations are even less frequently required, in this case predominantly by the health care establishment. The number of employees in the company is not a factor.

B) Testing

Audiometry and pulmonary function tests are performed most often in manufacturing companies, and chest x-rays and blood pressure examinations in health care establishments (Table 5). These same places of employment also are the ones to offer ECG, blood chemical profiles or biological monitoring, but these are offered less often. None of these tests is done in banks or retail/wholesale establishments, and rarely are they done in business offices or state/local offices. The largest work places are more likely than others to conduct these tests.

Conclusions

Since health benefits are rarely offered to part-time employees, one in six of the workers in the respondent companies has no health benefits. Since the respondents are the larger companies, the statewide picture is likely to reflect an even larger percentage of part-time employees without benefits.

There is a large potential for health and safety programs and for the use of health care personnel. Since both are usually found to be cost effective, returning one or more dollars per dollar spent, the potential needs to be converted into reality.

In summary, there appears to be considerable room for expansion of employee health, safety and wellness programs in West Virginia.

Long-Term Medical Planning—Quantity and Quality

ALLEN SILBERGLEIT, M.D., Ph.D.

Editor's Note: Reprinted with permission from The Bulletin, Oakland County (Michigan) Medical Society, November, 1987.

Multiple studies and consensus suggest that there really is a doctor glut. Since there are 60 per cent more physicians extant per 100,000 population (1985) than in 1960, the raw data certainly is clear cut. At the other end of the spectrum, fewer people want to become doctors. There were 1,570 fewer applicants to United States medical schools for the academic year 1986-1987 than the prior year. Of 31,323 total applicants, 17,092 were accepted. Over the past four years, first-year enrollment and total enrollment have continued to decrease. Add to this the early retirement of many physicians and a continued increase in the nation's total population. The old law of supply and demand seems to work! It's all for the best! Right? Probably not!

Social planners and health care planners have been notoriously short-sighted in estimating health care needs for the long run. The result has been a pattern of overshooting and retreat. The Hill-Burton Act perceived a tremendous shortage of hospital beds and resulted in a vast over-building of needless beds, which led to pressure to keep the beds filled and finally the de-bedding efforts of a few years ago. The nation did need a gradual increase in physicians over the past three decades but not the explosive output that doubled the graduating class size in the nation's medical schools from some 8,000 per year to some 16,000 per year by creating new schools and increasing class size. Some hold that planners and legislators are not as naive as they seem and have intentionally created a doctor glut for easier manipulation of physicians as part of a grander over-all plan.

During the past decade, a number of events have developed that will surely have a profoundly negative effect on "the other factor" — QUALITY. It is already easier to get into medical school and becoming more so. Some of the nation's dental schools are already finding it difficult to fill their classes with quality students, and some medical schools are approaching the same dilemma. Although it is easier to be admitted, it's more difficult to finance a medical education. Fully 82 per cent of medical school graduates in the class of '86 were in debt to the average tune of $33,499, a 117-per cent increase over average indebtedness for 1980 graduates. Beyond this hurdle, there are three major factors that assume a greater role in keeping many of "the best and the brightest" away from the medical degrees they would have sought.

1. The Professional Liability Situation. Nearly every facet has been said and re-said. Many prospective medical students are idealistic but there is a limit to the potential abuses tolerated.

2. Financial Reward. This is a crass item that isn't mentioned in polite society but it's a fact of life! Although it certainly is not the overriding factor that detractors of the profession imply, fair compensation for services is reasonable, and many of "the best and the brightest" are already opting for other professions where the prospects are greater at lesser effort.

3. Job Satisfaction. This is multifactorial and mostly negative. It ranges from the near elimination of physicians from leadership roles at levels that count to the semantic downgrading of physicians to "health care providers." It includes the various forms of government intrusion between the physician and patient and the various alphabet soup-managed care systems that pry physicians from their historic role as patient advocates.

It is a given that medical education and medical care must and should evolve. It is similarily a given that there have been abuses in a system less than ideal. Still, medical education in the United States is clearly the best in the world, as is medical care, considering the large and heterogeneous population that is this nation.

The fact that there is an abundance of excellent physicians at this time who are still patient advocates should not lull the "planners" and the public into a sense of complacency. A lag time is inherent in the system, but actuarial type curves should already indicate a projected decline in the quality of medical care although this is less tangible then quantity and somewhat more difficult to define. In the larger scheme of things, this is not the "doctors' problem." It is the public's problem, and efforts at changing the direction of further evolution should rest on this premise.

We welcome contributions to *In My Opinion*. Submissions should be addressed to Stephen D. Ward, M. D., Editor, *The West Virginia Medical Journal*, Box 4106, Charleston, West Virginia 25364.

President's Page

"It is estimated that over a million or more Americans are carrying the [AIDS] virus, and we need to know exactly who they are."

Moving Forward Together

In my acceptance speech last August at the Greenbrier and in my very first President's Page of the *West Virginia Medical Journal,* I spoke of the necessity for grass-roots unity. At that time my concerns centered around the RAPS-DRG debacle. The RAPS-DRG situation is temporarily in limbo, but there are certainly some strong undercurrents that may resurrect this at any time. If that should ever come about, physicians should not allow themselves to be piece-mealed and be victims of "the divide and conquer syndrome."

At the present time there appears to be some unrest in the membership concerning the Association's mission on HIV testing. It was the understanding of the leadership, after the passage of our omnibus HIV testing package, that we move forward and propagate our auspicious program throughout the state. The direction given to us was loud and clear. Despite some caveats concerning various aspects of our testing concepts, the plan was already set in motion to move forward.

Since the Greenbrier meeting, voluminous information has surfaced in the literature concerning many aspects of HIV infection and the programs which are being followed concerning the need for testing. What was most significant were revelations of personal experiences by many physicians who deal with problems of exposure to the disease itself and to those who have seropositive blood. Practically all the information available indicates that there is a great need to know exactly what is out there. What the serological status is of the patients we are treating is the foremost question in the minds of many physicians. Yes, it appears that we need to educate. We need to inform and make available information to the public concerning the disease and the way it is transmitted and prevented. We need much more, and testing in the different settings mentioned in our proposals should provide physicians with what they need to know to handle the problems properly. It is estimated that over a million or more Americans are carrying the virus, and we need to know exactly who they are. It would be impossible to test the whole nation, but where exposure is possible and where transmission can occur, testing is the only means available to identify properly individuals carrying the virus.

The West Virginia State Medical Association's proposals encompass the means to enable us to deal with the problems in a satisfactory manner at the present time. As physicians we should follow a philosophy similar to any other when we are dealing with health problems that confront our profession. Let's hold steadfast and move forward together and do the right thing. Support your State Medical Association.

—Cordell A. De La Pena, M.D.

An Abomination

At the time of this writing, the West Virginia Department of Health, AIDS-Related Medical Testing and Records Confidentiality Act has not been introduced in the Legislature. A descriptive, if brief, commentary on a draft of it by one early interested examiner of its contents, "An abomination," seems to epitomize a very objective reaction to it.

The bill is designed to cover the wide-ranging concerns of the homosexual and the IV drug-using population while it ignores or, at best, relegates to a distant secondary priority the interests and concerns of the remainder of our citizens. In the process of adoption of an essentially Gay Rights position the Health Department seems even to intrude on the proper turf of the insurance department with provisions of the original draft which deny any insurance company the right to turn down an applicant for any type of insurance solely on the basis of a diagnosis of AIDS, ARC or a positive test for HIV.

The bill, if not already passed, stands a good chance of passage according to the opinion of many West Virginia Legislature watchers. Why should this be? According to the best estimates put out by various Gay Rights groups, about 10 per cent of the population belongs in the category of homosexual. Without disputing in any way that figure, 9 out of 10 of our citizens might them conceivably object to the Department of Health legislation as at least potentially harmful to them.

Why then would a legislator, presumably intent on reelection, risk alienating 9 out of 10 potential supporters?

The answer involves the voting habits of single-issue voters who determine the beneficiary of their vote on the basis of who favors the one subject important to them. Multi-issue voters have a variety of interests and can tolerate disagreement on one or more issues with their favorite candidate providing they find themselves in agreement on most other issues. The group appeased by the Health Department bill promises to be single-issue voters who openly threaten to punish at the polls any legislator daring to deny them their legislative desires. Few elections are won by more than a 10-per cent difference in vote count. The threat may, in effect, allow them to be the deciding factor in an election.

Actually, the IV drug users are an empty threat as far as activity at voting polls is concerned. Nothing really interests them beyond their next "hit." Not even safety from a lethal infection. Protection from potential exposure to the fate of AIDS victims or HIV carriers is irrelevant, of no consequence. They, moreover, do not vote.

The principal beneficiaries of the legislation promulgated by the Department of Health are therefore almost exclusively those single-issue voters who manifest few, if any, interests other than gay rights. They are determined to assure the anonymity of their fellow members who are, or have high potential for being, carriers and spreaders of a lethal disease.

Some will say that this is just another example of democracy in action—the interests of minorities must be protected. The protection of such interests is most often desirable. There is reason, however, to question even this when in the process of protecting minority interests, the majority, and some very significant proportion of the minority, are subjected to the threat of a 100-per cent fatal disease. AIDS is, indeed, 100-per cent fatal.

Regrettably, we fear that in the final accounting, too many of our legislators will put reelection at its traditional place, at the top of their list of priorities and accede to the demands of the single-issue voters. An abomination? How true, how true!—SDW

Medicare Shenanigans

In early November, 1987, a non-participating West Virginia physician received a sheaf of letters from our medical carrier, Nationwide Insurance Company. They threatened fines and suspensions from participation in Medicare if he failed to refund to certain patients any amount they might have paid for certain services. Apparently some individual in the Claims Unit determined that certain services which the physician's patient had received were "not reasonable or necessary." They stated further that, if the doctor had received payment from the patient for these specific services, he should refund the money to them within 30 days; and further, that the patient had been informed of this action by a letter which instructed them to contact Nationwide if the physician failed to refund their money within a specified time.

These actions apparently were justified under Paragraph 9332 (c) of the Omnibus Budget Reconciliation Act of 1986 (P.L. 99-509). A copy of a regulation developed under this law was furnished to the doctor by Senator Robert Byrd's office, which

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had received it from a Medicare "supervisor" at Nationwide Insurance. Titled "Prohibition Against Billing for Unassigned Services which are Determined to be Medically Unnecessary," the regulalation directs that physicians who knowingly perform services for which Medicare will not reimburse the patient may be fined $2,000 and suspended from the Medicare program if refund is not made to the patient within a certain time after such services had been "determined to be medically unnecessary."

Nowhere in the language of this regulation is any criterion set forth for use in making the determination of "medically unnecessary." The regulation is clearly aimed at discrimination against non-participating physicians. Equally clearly, it gives someone in the Medicare program carte blanche in the determination of "medical necessity" of services. Also clear is the implication that if he were a participating physician he would have no such problems.

The physician in question wrote a letter to Nationwide strongly protesting their harrassing and intimidating tactics and sent copies of his patient's Medicare statement and his letter of protest to our Congressional delegation in Washington. Senator Robert Byrd was gracious enough to request an explanation from Nationwide and to send the doctor a copy of their reply. He also promised to call the matter to the attention of the Senate Finance Committee, which has jurisdiction over Medicare legislation.

It is impossible to overstate the impact of this kind of threatening activity on the conscientious practitioners who constitute the vast majority of our profession. That doctor's patients were uniformly resentful of the implications of these actions and are 100 per cent behind him in whatever action he decided to take. Multiply him by 2,500 and you get the number of West Virginia physicians who are at risk for this type of harrassment from now on, under current Medicare regulations.

Of course this is only one of innumerable onerous regulations implemented under current Medicare legislation. It is important that we stand up and fight for our patients and for ourselves against bureaucratic meddling and capricious determinations by individuals who are, at best, of questionable qualifications.

Additionally, this writer challenges anyone to justify the making of decisions of "medically unnecessary" on the basis of a submitted claim for reimbursement by a Medicare recipient. Of course Medicare would much prefer to set all fees and pay, or not pay, according to the whims of its clerks and supervisors. The medical profession should consistently and continually express its disapproval of policies which manifestly interfere with the patient - doctor relationship and lower the quality of medical care.—JNJ

Let's Recruit For The Schools

The editorial title no doubt brings images of searching high school ranks for six-foot, seven-inch forwards or 250-pound linemen. Recruit for medical school, you say? Preposterous!

Nationally, the medical school figures are remarkable. In 1974, there were 42,624 applicants for the 14,579 spots in first-year classes. Thirty-four per cent were accepted. By 1984, there had been a 16-per cent decline in applications (35,944 for 16,381 positions) and 46 per cent were awarded places in medical school. Applications have continued to decline, down nine per cent in 1985, minus five per cent in 1986 and down another 11 per cent in 1987.

The applicant pool in 1987 numbered 27,934, and a startling 57 per cent were admitted. West Virginia statistics parallel the national trend.

What are the reasons for this loss of interest in medicine? Interviews with bright young persons who have chosen other careers reveal diverse responses. These include concern about the impact that AIDS will have on the future of the profession, their probable exposure to liability suits, coupled with the growing expense of liability insurance, and the fact that a number of other professions offer comparable lifestyles with less commitment of time and energy.

Are we training too many physicians? No one knows the answer to this complex question because medicine keeps changing so rapidly that it impacts on any projected needs assessment. Suffice it to say that in West Virginia, an optimum physician/patient ratio has not yet been exceeded.

Are we taking less well-qualified students into medical school as the applicant pool contracts? The answer here seems to be no, but with fingers crossed. The large increase in women applicants and the renewed interests of many older students have tended to bolster the grade-point average and standardize test scores. Many educators admit, however, that they are concerned that the qualifications of applicants will become an issue in the near future.

Ours is not the only health care profession faced with lessening interests. Nursing and dentistry, for example, have also experienced declining applications. The reasons vary somewhat for each of the professions, but are interrelated.

It's very clear that each of us has an obligation to direct talented young people toward medicine. Our future depends on it.—DZM.

Our Readers Speak

Measures Of Mortality Across Groups

Different groups within the U.S. population have at various times been noted for high mortality rates of one type or another. The table below shows age-adjusted mortality rates for four groups: the U.S. (white) population, native North American (NNA), U.S. (non-white), and West Virginians (WV), for seven major measures of mortality shared by the four.

Certain patterns of data are apparent from this table: the low mortality rate from cardiovascular disease and neoplasms with the high accidental and liver disease mortality of the native North American; the high total mortality and high rates from cardiovascular and neoplastic causes for the non-white U.S. group and the West Virginians', and the high comparative mortality rate from COPD of West Virginians.

To find a measure of the significant determinants of total mortality across these four groups, multiple regression analysis provided an indication that some of the causes of mortality bore direct relationships with one another. This technique provides an equation basically of the form: $y = b(0) + b(1)x(1) + b(2)x(2) + \ldots$ and essentially measures the relation between the dependent variable (y) and multiple independent variables; in this case, total mortality can be taken as the dependent variable, and the various causes of mortality can be taken as the independent variables. These types of analyses can be done on a programmable calculator or by a personal computer. In this case both methods were used to provide similar results.

What was identified was cardiovascular (ASCVD) and pneumonia / fluenza mortalities as the major determinants of total mortality, with cardiovascular having a five-per cent or less probability of being such a predictor by chance alone, and for pneumonia/influenza a 10-per cent or less probability of functioning by chance alone. The equation derived is as follows:

Total mortality rate = −0.304 + 1.574 (ascvd mort. rate) + 15.669 (pneumonia/influenza mort. rate).

To seek common determinants of the total mortality is not to gainsay individual variations in a group's mortality that make them unique. In the case of West Virginians, in particular, a high total mortality rate can be addressed not only by individual variations such as the high mortality from COPD, but by attention to other factors such as cardiovascular and pneumonia/influenza mortality.

I would like to search for a common set of variables that define our high mortality rate. Perhaps anxiety has something to do with it.

John H. McWhorter, M.D.
P.O. Box 210
McWhorter, WV 26401

TABLE (1, 2) (1985, 1987)
Age-adjusted Mortality Rates for Four U.S. Population Groups

	U.S. (white)	*NNA*	*U.S. (non-white)*	*WV*
All Causes	523.6	559.5	694.5	911.8
ASCVD*	221.7	173.1	275.9	372.5
Neoplasms	130.2	88.4	157.8	190.5
Pneumonia/Flu	11.6	18.4	15.8	21.1
Diabetes	8.5	20.6	17.4	16.5
COPD	18.2	11.5	13.1	39.0
Chronic Liver Disease/Cirrhosis	9.3	30.7	14.3	7.6
Accidents	34.6	81.3	38.5	44.5

*ASCVD represents mortality from major cardiovascular diseases.

References

1. Thirty-eighth annual report. Vital health statistics of West Virginia. 1984. State of West Virginia Department of Health, Health Statistics Center, 1985.

2. Indian Health Service. Chart series book. April, 1987. U.S. Department of Health & Human Services, PHS.

Freedom To Practice

Note: Addressed to WVSMA President Cordell A. De La Pena, M.D., Clarksburg.

Your article* in the West Virginia Medical Journal was important for all of us. I pray we don't become another "Massachusetts Republic." Our Medical Auxiliary has plans of a program where spouses get up and tell how it was, living in socialized medicine countries, and thus why we should fight for our freedom to practice medicine. We must start with diligence and remain firm!

Our oldest son, Greg, is trying very hard to get into medical school next year, but I as a mother feel sorry for all of the bother he will have to fight, if and when he becomes a doctor. When I discuss the with him, he remains fast. He loves medicine! Maybe early in medical school someone should discuss health care problems such as socialized medicine.

Thanks for your "ears." I do enjoy the Journal each month.

Judith Webb
5620 Lynn Creek Road
Huntington, WV 25704

*"President's Page: A Sad Day in Medicine," January, 1988, Page 670.

Convention Topic

Psychiatrist's View Of AIDS

The psychosocial side of AIDS will be examined by a Cleveland Clinic psychiatrist during WVSMA's Annual Meeting in August.

Dr. Jeffery C. Hutzler, M.D., Program Director of the Outpatient Clinic at the Cleveland Clinic Foundation, will speak on "The Psychosocial Management of the AIDS Patient and Family" during the first general session Thursday morning, August 18.

The 121st Annual Meeting will be held August 16-21 at the Greenbrier in White Sulphur Springs, with general sessions scheduled also Friday and Saturday mornings, August 19-20.

At Cleveland Clinic, Doctor Hutzler also is a consultant in the intensive care units for surgery, medicine and neurosurgery, in the bone marrow transplant program, and in the sleep laboratory. He also is a consultant for the Federal Aviation Administration (air traffic controllers).

Psychiatric Evaluation

Doctor Hutzler's postdoctoral research has included psychiatric and neuro-psychological evaluation of ARC and AIDS patients.

He was named Teacher of the Year twice at Cleveland Clinic (1985-86 and 1986-87).

Doctor Hutzler is a Diplomate of the American Board of Psychiatry and Neurology, general psychiatry, and a Fellow of the American Psychiatric Association.

He was graduated from Westminster College, and received his M.D. degree in 1969 from Ohio State University. He interned at St. Joseph's Hospital and Medical Center in Phoenix, Arizona, and served his residency at Ohio State.

Jeffery C. Hutzler, M.D.

Born in Ann Arbor, Michigan, Doctor Hutzler joined the Cleveland Clinic staff in 1984.

The WVSMA House of Delegates met in special session February 7 in Clarksburg at the VA Medical Center with 47 delegates representing 13 component societies present. The House declined to revise last summer's AIDS resolution (see WESGRAM, February 10).

Other Subjects

Other program subject areas will include Controversial Procedures, Ethical Codes, Cardiovascular Surgery, A Defense Attorney's Perspective on Medical Liability, and Marketing a Medical Practice.

Convention activities will begin with a meeting of the Executive Committee Tuesday afternoon, August 16. Council will meet Wednesday morning, Thursday afternoon will be set aside for recreation and golf and tennis tournaments, meetings of WVSMA sections and specialty societies will be held Friday afternoon, and the second and final session of the House of Delegates will be Saturday afternoon.

Dr. James E. Davis, who will be installed as President of the American Medical Association in

June, as announced previously, will address the House. Because of a change in his schedule, however, he will speak at the second House session Saturday afternoon instead of the first session Wednesday afternoon, as announced earlier.

Program Committee

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

Additional convention speakers, topics and plans will appear in upcoming issues of *The Journal.*

State Urologists' Seminar March 26-27

The West Virginia Urological Society spring seminar will be held March 26-27 at the Charleston Marriott.

Guest speakers for the program, "Pediatric Urology," will be Drs. Robert Kay, Cleveland Clinic; John P. Gearhart, Johns Hopkins Hospital; Casimir F. Firlit, Northwestern University; William F. Tarry, West Virginia University, and Russell Steele, University of Arkansas.

Rocco Morabito, M.D., of Huntington is President and Program Chairman.

Correction

The Journal has been requested to make corrections which were received following publication in October, 1987, of the article, "Medical Grand Rounds From the West Virginia University Medical Center: Physiologic Profile and the Critically Ill Patient," Page 485.

On page 486, column 3, paragraph E), the correct formula is:

Right ventricular stroke work index (RVSWI) $= \frac{(CI \times MPAP) \times 13.6\ gm.m.m^{-2}}{HR}$

On page 488, column 1, paragraph A), the correct formula is:

Total oxygen delivery $= DO_2 = (10 \times 1.36 \times Hgb \times SaO_2 \times CO) + PaO_2 \times 0.003\ ml.m^{-1}$

Delegates Report

HARRY S. WEEKS, JR., M.D.
Wheeling, American Medical Association Delegate

It is a pleasure to report on the 1987 Interim Meeting (December 4-9) of the AMA House of Delegates. As meetings go, this one reflected a majority of the concerns facing practicing physicians and the subject matter was debated vigorously. In this regard, the AMA House of Delegates remains probably the most democratic assembly in the country.

West Virginia State Medical Association was adequately represented by our Delegates*, Alternates** and Officers. On the second day of each meeting you need at least 10 people to cover the Reference Committees. It has only been in recent years that we have been afforded this luxury. Our sole resolution on a uniform pre-admission certification form didn't fare too well but did engender considerable support. We should try again; it was referred to the Board of Trustees for study and, if enough pressure is generated, it will emerge in the next four years.

There are several major topics that captured most of the debate. AIDS, professional liability and MAAC were the topics receiving the most attention, and a summary of the activities follows.

There were several political items debated, including physician working hours and the nursing shortage, that will be around for a while before a clear definition with subsequent action emerges.

Of major importance to all practitioners will be the release of the Harvard Relative Value Study. Look for this in March. Since HCFA is paying for this study, it must be assumed it will serve as a smoke screen for another round of doctor bashing by the "feds." Another annoying resolution from New York focuses on a situation there whereby hospital medical directors have to be approved by the State Health Department Director.

*Other Delegates: John B. Markey, M.D., Charleston, and Joseph A. Smith, M.D., Dunbar

**Alternate Delegates: Stephen D. Ward, M.D., Wheeling; David Z. Morgan, Morgantown, and Carl J. Roncaglione, South Charleston.

The AIDS Epidemic

The House filed an important report of the Council on Ethical and Judicial Affairs providing ethical guidelines to physicians on three significant issues related to the AIDS epidemic:

1. A physician may not ethically refuse to treat a patient solely because the patient is seropositive.
2. Where there is no statute that mandates or prohibits the reporting of seropositive individuals to public health authorities and a physician knows that a seropositive patient is endangering a third party, the physician should:
   (a) attempt to persuade the infected patient to cease;
   (b) if persuasion fails, notify the authorities;
   (c) if the authorities take no action, notify the endangered third party.
3. A physician who knows that he or she has an infectious disease should not engage in any activity that creates a risk of transmission of the disease to others.

AMA Activities Related to AIDS

The House adopted a Board report that describes a full range of Association activities in response to the growing AIDS crisis, including:

- Publication and distribution of 11 informational reports on AIDS to 370,000 physicians.
- Regional AIDS health education programs were conducted in Pennsylvania, Texas, California, and Illinois.
- A national conference on "AIDS and Public Policy: A Community Response" was held in April with 800 attendees.
- Another national conference planned for March, 1988, and a video clinic on "AIDS in the Workplace" were developed.
- Through the judicial process the AMA has continued to exercise leadership in protecting pa-

tients with AIDS from unreasoned discrimination based on their handicap.

- A number of other educational activities were reported including cooperation with the CDC in the development of informational brochures for the public, private service announcements, and radio programming.

Problems in AIDS Education

The House Approved a report outlining various national efforts in educating the public on the prevention of AIDS. The report claims that efforts in health education and prevention have been inadequate in scope and lack coordination.

The report, submitted by the AMA Council on Scientific Affairs, recommended that the AMA support AIDS education in the United States by:

- Encouraging national coordination and tracking of all major AIDS health education and prevention activities.
- Encouraging the federal government through AMA policy statements and recommendations to increase funding for prevention and education significantly in accordance with Public Health Service Projections of the incidence of HIV-related disease.
- Encouraging the federal government through AMA policy statements and recommendations to take a stronger leadership role in ensuring the interagency cooperation, private sector involvement, and the dispensing of funds based upon real and measurable needs.
- Organizing, in collaboration with other groups, a national conference aimed at developing strategies and recommendations for AIDS education in the United States.
- Developing and facilitating by all methods available to the AMA educational resources and effective delivery programs for specific targeted groups.
- Encouraging physicians to assist parents in providing human sexuality education to children and adolescents.

Professional Liability

Professional liability continues to be of critical importance to medicine, generating much discussion at the Interim Meeting.

The House adopted a comprehensive report prepared by the AMA's Special Task Force on Professional Liability and Insurance and the AMA's Advisory Panel on Professional Liability. The report:

- described recent federal activity in this area
- described recently developed alternatives to the civil justice system
- discussed risk retention groups, procedural-based insurance rating plans, and the availability of Directors and Officers liability insurance.

The House also considered a number of resolutions on this issue and approved:

- a resolution calling upon the AMA to compile a report of state tort reforms that have been overturned by the courts in the past 15 years.
- a resolution calling on the AMA to support and commend the efforts of the Florida Medical Association in seeking enactment of an alternative mechanism to the current tort system for resolving medical liability disputes; called "Medical Incident Compensation Act" (MICA). The resolution also asked the AMA to evaluate carefully MICA along with other tort reform measures.
- a resolution calling on the AMA to seek the cooperation of state medical associations and consumer groups to procure the enactment of legislation that will limit contingent lawyer's fees to a reasonable percentage of the net recovery.

Maximum Allowable Actual Charge (MAAC)

Inequities in Medicare's maximum allowable actual charge limits stimulated several resolutions and stirred considerable debate among the physicians.

The House approved policy to:

- seek legislation to eliminate unfair fee distortions created by the current MAAC implementations
- exert every effort to prevent physicians from being penalized, persecuted, or prosecuted for unintentional possible MAAC violations
- relieve physicians of the inequitable MAAC provisions
- eliminate the artificial and misleading categorization of physicians as "participating" or "nonparticipating"
- seek to correct MAAC discrimination against young physicians
- oppose efforts by commercial carriers or the federal government which would require physicians to predict reimbursement for services rendered
- work for repeal of the provision of the Omnibus Budget Reconciliation Act of 1986 regarding notification of patients receiving elective surgery of the physician charge and the amount the patient would be expected to pay when the charge is $500 or more and the claim is not accepted on an assigned basis
- work to repeal provisions that require physicians to refund payments associated with Medicare services that are deemed medically unnecessary by HCFA after the fact
- communicate to the federal government that:

1. increases in Medicare reimbursements need to be universal
2. current reimbursement needs to be adjusted
3. discrimination in schedules between participating and nonparticipating physicians should be ended

Average Six-Year Increase 342 Per Cent

The accompanying tables, compiled by WVSMA Executive Director Merwyn G. Scholten, form a history of professional liability premiums of CNA Insurance Company since 1981.

The figures and comparisons are for premiums for:

- $1 million/$1 million occurrence coverage, 1981-1988 and 1982-1988 with CNA
- $1 million/$3 million occurrence coverage in 1972, when Aetna was the WVSMA-sponsored carrier, through 1988. (Aetna continued through 1980.)

The average increase in premiums in Class I through Class VII, 1982-1988, as indicated in Table 2, was 342 per cent.

Over the 16-year period of 1972-1988, obstetricians and neurosurgeons saw their premiums increase by 2,461 per cent! (Table 2)

In his letter of transmittal of the data to the Executive Committee and Council, Scholten commented:

"There are many occasions when we are asked what is the real percentage of increase which physicians have experienced over the last five or ten years. Referring to this data will give a ready answer to that question.

"The information is of particular interest at the present time as the State struggles with the Medicaid and PEIB issues and talks (as do the feds) about further cutting physician reimbursements. While the physician's cost of operating a practice continues to rise, government talks about further cutting Medicare reimbursements after having frozen fees almost constantly since 1984.

"We plan to share this information with legislative leaders as part of the argument for further tort reform if we are to hold premiums in check for the future."

TABLE 1
CNA Professional Liability Rates, 1981-1988
Occurrence Coverage - $1mil/$1mil limits

Rate Class	1981	% inc	1982	% inc	1983	% inc	1984	% inc
IA	—		—		—		—	
I	*$ 2,254	− 8 %	*$ 1,824	−19%	$ 1,920	+ 5 %	$ 2,192	+14 %
II	*$ 3,949	− 8 %	*$ 3,192	−19%	$ 3,360	+ 5 %	$ 3,832	+14 %
III	*$ 6,885	−14.2%	*$ 5,568	−19%	$ 6,300	+13 %	$ 7,220	+14.6%
IV	*$ 8,956	−14.2%	*$ 7,244	−19%	$ 7,876	+ 8.7%	$ 9,020	+14.5%
V	*$11,195	−14.2%	*$ 9,056	−19%	$ 9,868	+ 8.9%	$11,312	+14.6%
VI	*$13,436	−14.2%	*$10,868	−19%	$11,760	+ 8.2%	$13,476	+14.5%
VII	*$17,912	−14.2%	*$14,492	−19%	$15,748	+ 8.6%	$18,052	+14.6%
VIII	NA		NA		$16,800	new	$19,252	+14.5%

Rate Class	1985	% inc	1986	% inc	1987	% inc	1988	% inc
IA	$ 4,093	+86.7%	$ 4,241	+ 3.6%	$ 5,196	+22.5%	$ 5,606	+ 7.9%
I	$ 3,560	+62.4%	$ 5,654	+58 %	$ 6,927	+22.5%	$ 7,474	+ 7.9%
II	$ 7,124	+85.8%	$11,309	+58.7%	$12,124	+ 7.2%	$13,081	+ 7.9%
III	$11,592	+60.6%	$17,856	+54 %	$21,684	+21.4%	$23,397	+ 7.9%
IV	$15,457	+71.3%	$23,808	+54 %	$29,041	+21.9%	$31,335	+ 7.9%
V	$19,320	+70.8%	$29,760	+54 %	$38,720	+30 %	$41,778	+ 7.9%
VI	$23,188	+72.1%	$35,712	+54 %	$50,388	+40.9%	$54,314	+ 7.9%
VII	$28,988	+60.6%	$47,616	+64 %	$61,952	+30 %	$66,846	+ 7.9%
VIII	$30,912	+60.6%	--- Class dropped after 1985 ---					

*Class I & II coverage was for $1.1 mil/1.3 mil these years.

*Class III-VII coverage was for $1.25 mil/1.5 mil these years.

Note: Decrease shown for 1981 year is decrease over previous Aetna rates. In 1982, CNA decreased rates by 19%.

TABLE 2
OBSERVATIONS
The cumulative increase in rates 1982 (lowest price year with CNA) through 1988 is as follows:

Class IA	36.9%	(three years, 1985-1988)
Class I	309.7%	
Class II	309.8%	
Class III	320.2%	
Class IV	332.5%	Ave. increase of I-VII = 342%
Class V	361.3%	
Class VI	399.7%	
Class VII	361.2%	

It should be noted in the above rate charts that in 1985, General Surgeons were moved from Class V to Class VI and Obstetricians were moved from Class VI to Class VII. Class VIII which existed from 1983-1985 included neurosurgery.

By means of a further comparison, consider that in 1972 there were only Classes I-V and the quoted rates below included professional liability, SCOPE Personal & Professional, and Premises Liability. Aetna was the WVSMA-sponsored carrier from 1972-1980 at which time it withdrew from the business.

Aetna Rates, 1972 for $1mil/$3mil Occurrence Coverage:

Class I	$ 440	Per Cent increase 1972-1988 = 1,598.6%
Class II	$ 717	Per Cent increase 1972-1988 = 1,724.4%
Class III	$1,598	Per Cent increase 1972-1988 = 1,364.1%
Class IV	$2,104	Per Cent increase 1972-1988 = 1,389.3%
Class V	$2,610	Per Cent increase 1972-1988 = 1,500.6%

Consider the plight of an obstetrician or neurosurgeon who is now rated Class VII but was rated in Class V in 1972; these specialties have seen their premiums rise 2,461 per cent in those 16 years.

From left, Drs. Donald Armstrong, New York City, AIDS speaker; William O. McMillan, Jr., Charleston, Program Committee Chairman; Lester R. Bryant, Marshall University School of Medicine Dean, and Robert B. Belshe, Huntington, AIDS speaker

'Mid-Winter'—A Continuing Tradition

Successful, stimulating and informative. That was the consensus as the 21st Mid-Winter Clinical Conference concluded January 24 in Charleston at the Holiday Inn Charleston House.

The week-end continuing medical education event (January 22-24) was attended by 306 people including 188 doctors and 88 exhibitors, the latter representing 42 exhibit booths.

Attendance at general sessions remained consistently high as state doctors heard papers on dermatology, AIDS, pulmonary diseases, and a potpourri of topics: hypertension, insulin therapy, coronary heart disease, and breast reconstruction.

As the conference grows each year, more and more programs are "piggy-backing," including this year state Young Physicians, Psychiatric Association, the first state meeting of CME providers, component/specialty society presidents and chiefs-of-staff/medical staff presidents, American College of Physicians, state ophthalmologists, WVSMA Auxiliary, WESPAC dinner-dance with gubernatorial candidates, WVSMA Cancer Committee, and others.

The 1988 Friday Physicians' Session spotlighted office billing.

The registration also included four residents, nine medical students, 11 nurses and two physician's assistants.

Sponsors are WVSMA and WVU and MU schools of medicine.

Dr. N. LeRoy Lapp, Morgantown, pulmonary diseases speaker, is interviewed for local television broadcast.

The general session breaks for coffee and time to visit exhibits.

Karen A. Zupko, Chicago, speaker for physicians' session on office billing, emphasizes a point.

Dr. William A. Welton, left, Morgantown, Moderator, and Dr. Robert B. Point, Kings Mountain, North Carolina, formerly of Charleston, speaker for dermatology session

On the left is Dr. Richard S. Hopkins, Columbus, Ohio, AIDS speaker for both physicians' and public sessions. Enjoying themselves at break are, from left, Drs. Sriramloo Kesari, Madison; Gurijala N. Reddy, Wheeling, and Ahmad M. Maraikayer, Charleston.

Dr. David C. Fogarty, Morgantown, speaker on breast reconstruction, and Lucy Pierce, Morgantown

Dr. Robert E. Olson, Stony Brook, New York, speaker on "Diet, Red Meat and the Risk of Coronary Heart Disease"

At the Young Physicians' meeting held during the conference are, from left, Drs. Stephen L. Sebert, Fairlea; Richard A. Capito, South Charleston; James W. Caudill, Charleston; David W. Avery, Vienna; and Patsy P. Copoletti, Jr., Wellsburg.

Dr. Nicholas J. Gross, left, Chicago, speaker, and Dr. Dominic Gaziano, Charleston, moderator for pulmonary diseases session

Dr. Donald G. Vidt, left, Cleveland, hypertension speaker, and Dr. Richard E. Kleinmann, Charleston, who talked on insulin therapy

Drs. Joseph T. Skaggs, left, Program Committee member, and Donald Rosenberg, both of Charleston

Drs. Daniel Wilson, left, and Thomas O. Dickey, both of Wheeling

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine for part of 1988, as compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Robert E. Kristofco, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Kristofco, (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

Marshall University

Mar. 19-20, Huntington, Conscious Sedations (hands-on seminar)

Mar. 23, Huntington, Research Day

West Virginia University

Mar. 18-19, Living With Cancer

April 8, Hospital Ethics Committee in WV: .A Symposium on Their Functions

April 9, Medical Examiners Conference

April 29, Internal Medicine Day

April 30-May 1, Clinical Workshops in Physical Therapy

May 6-7, Orthopedic Reunion Days

May 14, Symposium on Sleep Disorders

June 3-4, Anesthesia Update '88

CAMC/West Virginia University, Charleston Division

Mar. 18-19, AIDS Symposium

Mar. 25, Annual Newborn Day

Mar. 30, Research Day

May 5-6, Angioplasty Demonstration Course

May 20, Sexuality in the Spinal Cord Patient

June 4, Interventional Radiology

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center Morgantown

Brownsville, PA, Brownsville General Hospital, 1st and 4th Thursday, 11 A. M. to 1 P. M.—Mar. 3, "Diabetic Retinopathy: Ophthalmologic Evaluation," Nabil Jabbour, M.D.

Mar. 24, "Hand Infections," David Labosky, M.D.

Fairmont, Fairmont Clinic, 3rd Wednesday, 12:30 P. M. — Mar. 16, "Genito-Urinary Cancer: Etiologies & the State of Immuno-Therapy," Donald L. Lamm, M.D.

Fairmont, Fairmont General Hospital, 1st Tuesday, 8:15-9 P.M.—March (No Program)

Martinsburg, City Hospital, Special Lectures/Grand Rounds—March (No Program)

Martinsburg, V.A. Medical Center, 1st Thursday, 2 P. M. — Mar. 3, "Management of Acute 'Street Drug' Intoxication," C. Rollyn Sullivan III, M.D.

New Martinsville, Wetzel County Hospital, 2nd Thursday, 12-1 P. M. — Mar. 10, "ERCP—A Diagnostic Tool," Donald Seibert, M.D.

Uniontown, PA, Uniontown Hospital, Special Lectures—Mar. 30, "Management of the Thyroid Nodule," Elliott Chideckel, M.D.

Waynesburg, PA, Greene County Memorial Hospital, 2nd and 4th Tuesday, 7-9 P. M. — Mar. 8, "Diabetic Retinopathy: Ophthalmologic Evaluation," Nabil Jabbour, M.D.

Mar. 22, "Foot Disorders," Eric L. Radin, M.D.

Weston, Stonewall Jackson Hospital, 2nd Monday Evening, Every Other Month, 6-7 P. M.—Mar. 14, "Update on AIDS in Hospital Setting," Brooks Gainer, M.D.

Wheeling, Ohio Valley Medical Center, 2nd Wednesday, 8-9 A.M.—Mar. 9, "Streptococcal Infections—Presentation," Robert D'Alessandri, M.D.

Regularly Scheduled Continuing Education Outreach Programs from WVU Medical Center-Charleston Division/CAMC

Beckley, Southern W. Va. Clinic, 4th Thursday, 5:30 to 7:30 P. M. — Mar. 24 (tba)

Cabin Creek, Cabin Creek, Medical Center, Dawes, 2nd Thursday, 8-10 A. M. — Mar. 9, "Pediatric Oncology," Kenneth Starling, M.D.

Gassaway, Braxton Co. Memorial Hospital, 1st Wednesday, 7-9 P. M.—Mar. 2, "The Breast," Daniel Foster, M.D.

Greenbrier, Library, Greenbrier Clinic, 3rd Tuesday, 4-5 P. M. — Mar. 15, "Stroke TIA & Bruit: Medical & Surgical Approaches" (speaker tba)

April 19, "Current Concepts of Alzheimer's," Glen Goldfarb, M.D.

Madison, Boone Memorial Hospital Conference Room, 2nd Tuesday, 7-9 P. M. — Mar. 8, "Treating Substance Abuse: The Care Unit Approach," John Hootie.

April 12, "Hand Injuries," Mike Fidler, M.D.

Oak Hill, Plateau Medical Center (Oyler Exit, N 19) 4th Tuesday, 7-9 P. M. — Mar. 22, "Update: Neurology Surgery," John Schmidt III, M.D.

April 26, "Pediatrics," James McJunkin, M.D.

Summersville, Summersville Memorial Hospital, 1st Tuesday, 6:30-8:30 P. M. — Mar. 1 (tba)

April 5, "New Medicine for Acute MI," Hal Selinger, M.D.

Welch, Welch Public Library, 3rd Wednesday, 12 Noon-2 P. M. — Mar. 16, (tba)

April 20, "Management of Acute Pain," Tom Douglas, M.D.

Whitesville, Raleigh-Boone Medical Center, 4th Wednesday, 11 A. M.-1 P. M. — Mar. 23, "Update Physical Therapy Technology," John Bowles, M.D. (This program only at Coal River Clinic)

Williamson, Williamson Memorial Hospital, 1st Thursday, 6:30-8:30 P. M. — Mar. 9, "Pediatric Depression," T. O. Dickey, M.D.

Principal speakers for the January CME meeting in Charleston were Frances M. Maitland, Assistant Secretary, Accreditation Council for Continuing Medical Education (ACCME), Lake Bluff, Illinois, and David Lichtenauer, Cincinnati, Medical Science Liaison, The Upjohn Company.

First CME Meeting Said Success

A meeting for state continuing medical education providers was held Friday morning, January 22, preceding the opening of the 21st Mid-Winter Clinical Conference in Charleston.

Thirty-two persons, representing a broad cross section of CME providers, attended the program, "Continuing Medical Education in West Virginia." The meeting was sponsored by the West Virginia State Medical Association and the Continuing Medical Education Offices at Charleston Area Medical Center, Marshall University School of Medicine, and West Virginia University School of Medicine.

The goal of the meeting was to assist participants in better understanding the essentials of CME program planning to enhance the quality of CME provided to physicians in West Virginia.

The CME session was preceded by a breakfast meeting of the Committee on Medical Education and Hospitals of the WVSMA. The committe, chaired by William O. McMillan, Jr., M.D., heard a report from Karen Hackleman of the Southeastern Atlantic Regional Medical Library Services concerning final results of a study of strategies for introducing physicians to computerized medical literature databases.

The keynote speaker for the CME meeting was Frances Maitland, Assistant Secretary of the Accreditation Council for Continuing Medical Education (ACCME). Ms. Maitland described in detail the "Essentials for Accredited Sponsors of CME."

In the Essentials, the ACCME identified certain elements of organization structure and method which contributed to quality CME. A lively question-and-answer session followed Ms. Maitland's discussion.

Mary Hamilton, Executive Assistant of the WVSMA, and Doctor McMillan described the role of WVSMA in surveying hospitals for CME accreditation and explained the process for approval of accredited sponsors.

Small group discussions, led by representatives of the program's sponsoring organizations, allowed participants to discuss the elements of quality in CME programming and identify problems and pose questions about the process.

The meeting concluded with a luncheon featuring a presentation by David Lichtenauer, Medical Science Liaison from The Upjohn Company. Lichtenauer's topic, "Relationships with the Pharmaceutical Industry," addressed issues of cooperation and support for CME from the industry, and provided some tips on working with pharmaceutical companies.

"The CME workshop may become a regular feature in conjunction with the Mid-Winter Conference as participants were pleased with the first meeting of West Virginia CME'ers and encouraged broader discussion in the future," commented Robert E. Kristofco, WVU Assistant to the Dean/CME.

'87 WESPAC Roster On Page 98

The 1987 roster of WESPAC members is printed on page 98.

WESPAC (West Virginia Medical Political Action Committee) is a separate, segregated fund established by WVSMA. A regular membership is granted with a contribution of $50; sustaining membership, contributions of $100 or more.

WESPAC membership provides a dual membership with AMPAC, the AMA Political Action Committee. Membership contributions are shared with AMPAC. WESPAC contributes to state elections; AMPAC, to congressional candidates and campaigns.

To become a 1988 member, make your personal check payable to WESPAC, and send to WESPAC, Box 4106, Charleston, WV 25364.

Registration Form In This Journal

The Greenbrier registration form has been inserted in this issue of *The Journal* and can be torn out preceding page 91.

Members are urged to make hotel reservations as soon as possible for the WVSMA Annual Meeting August 16-21. Early reservations will help assure satisfactory accommodations. The hotel requires reservations at least 45 days in advance.

Group Okays Home Care Standards

Community-based and hospital-based home care organizations will be eligible for survey by the Joint Commission on Accreditation of Healthcare Organizations beginning June 1, 1988. The Joint Commission's Board of Commissioners (BOC) gave final approval to the new home care standards and survey process at its December meeting. The standards for the first time apply to all home care organizations.

"Giving birth to the new accreditation program was a difficult but rewarding experience," said Dennis O'Leary, M.D., Joint Commission President. "We learned a great deal from our interaction with providers, insurers, business leaders, and consumer advocates, and we're grateful for their guidance. We look to these groups for continued support in making the standards an integral part of the home care industry." •

The Joint Commission's new home care standards will apply to:

- home health care agencies offering skilled, intermittent care;
- private duty agencies providing care at home;
- IV therapy companies administering drugs in the home;
- durable medical equipment companies providing equipment and patient or client instruction in the home;
- organizations providing only personal care or chore services;
- rehabilitation organizations providing therapy services in the home;
- organizations providing respiratory services in the home;
- and pediatric home care agencies.

Organizations providing any of these services directly or through a written contract are also eligible for survey. For more information about home care accreditation, contact Barbara McCann at (312) 642-6061.

Poetry Corner

Dreaming

I dreamt last night, and in my dream
I saw your lovely face.
Then, in my dream, you went away
To some forgotten place.

And in my grief I strolled alone,
Where many times before
I'd walked with you beside me;
Along the moonlit shore.

As waves were breaking on the beach,
And quiet breezes blew,
I sat and thought of other nights
When I had been with you.

Then, as the morning sun arose,
I wakened from my sleep
To find you there beside me,
My own, for life to keep.

And as you lay there in your dreams,
I wondered if you, too,
Would waken with a heartfelt joy
That I belong to you.

E. Leon Linger, M.D.
Buckhannon

Nature's Vagaries

It seemed like spring, with low clouds scudding across the sky before the wind.
A light rain began which sent us in,
But it was time because the sun had gone.
The drizzle soon was spent,
And through that quiet night we lent
No thought to what outside was going on.

The snow, silent in its encompassing embrace,
Had folded lake and wood
And all that stood
In its mantle white in morning's light.

Nature's season change so slowly,
Or so it seems,
When in January one dreams of flowers and fruit trees,
And frets for all the winter yet to come.
But how quick and furtive can she be
When overnight she plays such tricks
On you and me.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner.

Meeting To Examine Hospitals, Doctors

Hospital-physician alliances will be spotlighted at a workshop March 25 at the Charleston Marriott.

The program, "Developing Successful Diversification Strategies: Hospital-Physician Alliances," is sponsored by West Virginia Hospital Association, West Virginia Hospital Research and Education Foundation, and Nash and Company of Pittsburgh.

The workshop is designed for doctors, administrators, board of trustees member, and financing, planning and marketing staff members.

The agenda will include hospital-physician joint venture companies (What are they?), negotiating managed care contracts, financial analysis of diversification and joint venture opportunities, and home medical equipment and home IV therapy.

Registration is $75, with checks made payable to West Virginia Hospital Research and Education Foundation, Inc. and mailed to Sharon L. Pence, Conference Coordinator, WVHREF, 3422 Pennsylvania Avenue, Charleston, WV 25302. Telephone (304) 345-9842.

Ethics Committee Symposium April 8

A hospital Ethics Committee Symposium will be held April 8 in the Basic Sciences Addition Auditorium at West Virginia University, Morgantown.

The program is designed for health care personnel involved in ethics committees throughout the state. It should help them function as members of the committee and direct their activities, make them knowledgeable of the issues discussed by ethics committees, and be able to identify issues for committee discussion.

Discussion topics will include "Ethical Dilemmas in Patient Care: Case Discussion," "Overview of the Function of Hospital Ethics Committees," and "Suffering, Killing, and the Human Care of the Dying."

Faculty members will be:

Wilhelm Albrink, M.D., WVU School of Medicine; Chaplain David E. Carl, Cabell-Huntington Hospital, Huntington; Ronald Cranfors, M.D., Minneapolis, President of the American Society of Law and Medicine, and Consultant to the President's Commission on the Study of Ethical Problems in Medicine and Biomedical & Behavioral Research;

Derrick L. Latos, M.D., WVU Wheeling Division; Joseph J. Miller, J.D., Charleston Area Medical Center; Doris M. Nicholas, MSW, Director, Social Services, WVU Hospitals, Inc.; Chaplain W. Delma Parris, United Hospital Center, Clarksburg; Rev. Pamela Shier, Director of Chaplaincy Services, WVU Hospitals, Inc., and Mark R. Wiclair, Ph.D., WVU.

Course Coordinator will be Alvin H. Moss, M.D., Chairman of the Hospital Ethics Committee, WVU Hospitals, Inc.

Sponsors are WVU Hospitals, Inc., WVU CME Office and WVU Hospital Research and Education Foundation.

The program is approved for eight hours of Category 1 credit, and for .8 CEUs.

Registration before March 25 is recommended. For registration and other information, call (304) 293-3937.

Two small blocks of rooms have been reserved for course participants at Mountaineer Motel and Quality Inn. Reservations must be made directly with these hotels. Call Mountaineer Motel at (304) 599-4850, or Quality Inn at (304) 598-2120. Indicate that you are attending a continuing medical education program of the WVU school of Medicine.

Senator Mario J. Palumbo, D-Kanawha, left, who has since announced for Governor, was one of the guest speakers for a WESPAC dinner-dance January 23 during WVSMA's Mid-Winter Clinical Conference in Charleston. On the right, during the dinner portion of the WESPAC affair, are Senator M. Jay Wolfe, R-Harrison, a gubernatorial candidate-speaker, who since has become a candidate for U.S. Senator, and Mrs. Wolfe.

Listening intently during the WESPAC dinner talks in January are, from, left, Mrs. Mario J. Palumbo, Gus R. Douglass, West Virginia Commissioner of Agriculture, a candidate for Governor, and Mrs. Douglass. Douglass was the third dinner speaker.

"It was a sure-fire investment all right! I really got burned."

Stephen S. Scheidt, M.D.

William M. Patterson, M.D.

17 Speakers, Entertainment Attraction On AAFP Program

Some 17 physicians will be speakers for the 36th annual scientific assembly of state family physicians in Huntington April 15-17 at the Radisson Hotel.

The annual scientific program of the West Virginia Chapter, American Academy of Family Physicians will cover the subjects of chronic pain, renal failure, AIDS, Alzheimer's disease, stroke, angina, dermatology, anxiety and depression, insomnia, and others.

Appearances by country music singer Waylon Jennings and the Jay Flippin Orchestra are among the entertainment attractions scheduled. Jennings will perform Friday evening, April 15, at the Huntington Civic Center as a benefit for the Family Medicine Foundation of West Virginia. There also will be a benefit dance for the Foundation Saturday evening, with music provided by the Flippin Orchestra.

Speakers

Speakers and topics will be:

Drs. Charles O. Shaughnessy, South Field, Michigan, "Chronic Pain"; Ernest Hodge, Cleveland Clinic and Charleston Area Medical Center, "Renal Failure and Transplantation"; Robert Guthrie, Columbus, Ohio, "Cardiovascular Management in Office Base Practice"; Richard J. Andrassy, University of Texas, "Medical Considerations for the Nutritional Management of GI Disorders in Patients";

Robert Walker, Huntington, "Non-Cardiac Causes of Chest Pain"; Bruce W. Dixon, Pittsburgh, "Sexually Transmitted Disease (AIDS), The Family Physician Role and the Impact on Patients and Community"; Thomas McGlynn, Hershey, Pennsylvania, "Clinical Disorders of the Bone"; Don Steinmuller, Cleveland Clinic, "Treatment of Essential Hypertension With Emphasis on Lipid Profile"; Claude Burton, Raleigh-Durham, North Carolina, "Management of Decubitus Ulcers";

William R. Hiatt, Denver, "Peripheral Vascular Disease—Diagnosis and Management in the Diabetic"; Stephen Scheidt, Cornell University, "Angina Update"; Marian E. Dunn, Brooklyn, New York, "Sexual Dysfunction"; Eric B. Zurbrugg, Chicago, "New Concepts in the Treatment of Seizures and Epilepsy"; William Patterson, Birmingham, Alabama, "Pain in Anxiety and Depression"; Joseph S. Sanfilippo, Louisville, Kentucky, "Transdermal Estrogen Osteoporosis"; and Gordon R. Bernard, Nashville, "Treating Respiratory Infections in the Office Base Practice."

Special seating for members, guests and exhibitors at the Jennings concert has been arranged through March 15, after which tickets will be available on a "first-come" basis. A percentage of the ticket sales will benefit the Foundation. Tickets are $15 each.

For registration and additional information, contact West Virginia Chapter, AAFP, P. O. Box 7058, Cross Lanes, Charleston, WV 25356-0058. Telephone (304) 776-1178.

April 1 WVSMA Dues Payment Deadline

April 1 is the deadline for payment of WVSMA membership dues. WVSMA headquarters is asking doctors to submit their membership dues to their component societies immediately.

The list of members on hand at headquarters April 1 will make up the *1988 Roster of Members.*

As in 1987, members must complete an order form in order to receive a free Roster. Additional copies may be purchased for $25.

Look for order forms and further information in upcoming issues of *Wesgram* and *The Journal.*

Journal Manuscript Directions Revised

The Manuscript Information "box" for the guidance of contributors of scientific articles to *The Journal* has been revised (Page 69).

The directions have been expanded to make the method of preparing manuscripts more clear.

Authors should note that references in text now are made by arabic numerals in parentheses on the same line rather than by raising them above the line (superscript), which was previously specified. No other changes in "style" have been made.

The Journal style for scientific articles, with minor exceptions, is in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (International Committee of Medical Journal Editors).

Drs. David K. Heydinger, Director of the West Virginia Department of Health; Cordell A. De La Pena, Clarksburg, WVSMA President, and Stephen D. Ward, Wheeling, from left, chat before the special meeting of the WVSMA House of Delegates February 7 in Clarksburg at the VA Medical Center.

Parking Permit Discretion Asked

State doctors have been asked to use discretion in their determination of the need for special parking privileges for the handicapped.

The request came from the Clarksburg Consumer Advisory Committee, which is a part of the Consumer Affairs Program established by the West Virginia Division of Rehabilitation Services. It acts in an advisory capacity in attempting to improve the lifestyle of handicapped people.

"The law and its enforcement make it not only easier but safer for severely mobility-impaired people to get out into the mainstream of society," said Waneda Haynes, Chairperson of the Clarksburg Committee.

In an open letter to state physicians, she continued:

"As you know, there are a limited number of parking spaces. Because of this, we need your help. Your role in signing the application form is essential to obtain the state permit making it possible to park in the designated areas.

"In signing this form, you are in the best position to know if only a temporary permit is needed [this lasts six months] or if the mobility impairment is severe enough to warrant a permanent permit. We want everyone who needs this privilege to be able to take advantage of it. On the other hand, we don't want to see the privilege abused.

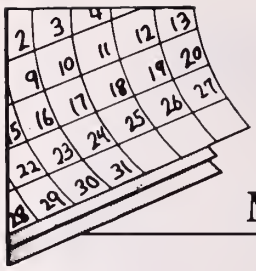
"Your help and discretion are essential in this regard. We will be very grateful for your continued cooperation in making sure that severely mobility-impaired people have the opportunity to enjoy this privilege."

State Surgeons Plan May Meeting

Dr. John Sawyers, Professor and Chairman of Surgery, Vanderbilt University, Nashville, Tennessee, will be guest speaker for the spring meeting of the West Virginia Chapter, American College of Surgeons.

The meeting will be held May 4-7 at the Greenbrier in White Sulphur Springs.

For additional information, call (304) 598-2801.



Medical Meetings

March

2-6—Physicians for Social Responsibility, Washington, D.C.

3-6—Am. College of Physicians, New York.

20-23—Am. Society of Abdominal Surgeons, Williamsburg, VA.

23-26—Am. Burn Assoc., Seattle.

24-27—Am. Medical Student Assoc., Washington, D.C.

25-27—WV Urological Society Spring Seminar, Charleston.

26—CNA Loss Control Seminar, Charleston.

27-30—Am. College of Emergency Physicians, Coronado, Calif.

27-31—Am. College of Cardiology, Atlanta.

April

10-12—Am. College of Chemosurgery, Monterey, Calif.

15-17—WV Chapter, AAFP, Huntington.

16-21—College of Am. Pathologists, Kansas City Mo.

18-20—Am. Assoc. for Thoracic Surgery, Los Angeles.

19-24—Am. Assoc., Orthopaedic Medicine, Dallas.

21-23—WV Chapter, Am. Academy of Pediatrics, Morgantown.

24-27—WV Academy of Ophthalmology, 41st Annual National Spring Meeting, White Sulphur Springs.

30—Am. Diabetes Assoc., WV Affiliate, Inc., Wheeling.

May

1-5—Am. College of Obstetricians & Gynecologists, Boston.

1-6—Am. Assoc. of Immunologists, Las Vegas.

2—Am. Pediatric Society, Washington, D.C.

4-7—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

11-14—Am. Pediatric Surgical Assoc., Tucson.

14-20—Am. Gastroenterological Assoc., New Orleans.

27-30—WV Academy of Otolaryngology, Head & Neck Surgery, White Sulphur Springs.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

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WVU Medical Center News

West Virginia University

Compiled from material furnished by the Medical Center News Service, Morgantown, W. Va.

John B. Bodensteiner, M.D.

Pediatric-Neurology Director Named

John B. Bodensteiner has joined the WVU faculty as Professor of Neurology and Pediatrics and Director of the Pediatric Neurology Service.

Doctor Bodensteiner was formerly Professor of Neurology, Pediatrics and Pathology at the University of Oklahoma and Director of its Muscle Core Laboratory.

He is currently the only pediatric neurologist in West Virginia fully trained to deal with disorders which affect the nervous system in infants and children.

His research interests include fetal alcohol syndrome, epilepsies in children, Tourette's syndrome, and spinal muscular atrophies.

Doctor Bodensteiner also will help set up a muscular dystrophy clinic at WVU.

"Doctor Bodensteiner is an outstanding academic pediatric neurologist and we are fortunate to have him join the Medical Center faculty," said Dr. Ludwig Gutmann, Chairman of the Department of Neurology. "We are committed to establishing a pediatric neurology service of excellence—one that will strongly emphasize patient care as well as academics."

Doctor Bodensteiner served as a special clinical fellow in neuromuscular disease at the Mayo Clinic and also has held fellowships at the University of Iowa and Iowa State University.

In 1979 he won the Golden Rattle Award for resident teaching in pediatrics at the University of Texas Medical Branch, and in 1981 he was presented the Outstanding Teacher of the Year Award at Oklahoma Children's Memorial Hospital.

He is the author of more than 85 publications and is currently Associate Editor of the *Journal of Child Neurology* and a member of the Council of Biological Editors.

He serves as an examiner for the American Board of Psychiatry and Neurology and is a Fellow of the American Academy of Neurology.

Spine Surgery Chief Announced

Dr. Phillip J. Mayer has been named Chief of Spine Surgery in the Department of Orthopedic Surgery. Doctor Mayer also will be Co-Director of the Pickett-Nugent Spine Service at WVU Hospitals, Inc.

A 1971 graduate of the University of Louisville School of Medicine, Doctor Mayer brings to WVU an extensive background in orthopedic surgery.

He began his residency training in general surgery at the Medical College of Virginia in 1972. Following two years of service as a U. S. Navy Medical Officer in the mid-1970s, he completed his training in orthopedic surgery at the University of Rochester in 1978.

Doctor Mayer later served as a postgraduate fellow in spine surgery, sports medicine, and pediatric orthopedics at the Children's Hospital Medical Center at Harvard University and the Duchess of Kent Children's Hospital at the University of Hong Kong.

Doctor Mayer's academic career began in the Department of Orthopedics at the State University of New York at Stony Brook where he served as Head, Section of Scoliosis, and Chief, Division of Pediatric Orthopedics.

Prior to coming to West Virginia, Doctor Mayer was in private practice for three years in Johnstown, Pennsylvania.

He has published numerous articles in professional journals and contributed chapters to three books. His current research interest is in coagulation disorders that occur during major surgery.

The Pickett-Nugent Spine Service at WVU, named for Justus C. Pickett, Professor Emeritus of Orthopedic Surgery, and Robert G. Nugent, Professor of Neurosurgery, uses a multidisciplinary team approach to treat patients with complex spinal problems. The service offers diagnostic and therapeutic services to treat spinal problems such as spinal deformities, congenital anomalies, fractures, spinal cord injuries, degenerative bone disease, disc disease, inflammatory diseases, infection, primary and secondary tumors, and metabolic disease-related problems.

New Computer Three Times Faster

Unisys Corporation has made a grant-in-kind of $1.3 million to WVU. The grant enables WVU Medical Center to replace an outdated mainframe computer with Unisys's new, top-of-the-line computer, the 1100/90 Model II, while saving more than $40,000 in annual computing costs.

At WVU the 1100/90 Model II will replace the nearly 10-year-old 1100/80A which WVU has used since 1981. The new computer, the market value of which is approximately $3.5 million, can process 15 million instructions per second and is more than three times faster than the older model.

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What makes someone "good" on the job?

If you're a line manager, you know which categories to look at. Willingness to work. Reliability. Attendance and punctuality. Productivity. Because someone who comes to the job ready, willing and able to earn a paycheck is an asset to any department.

In a recent Louis Harris Poll, line managers were asked to evaluate workers with disabilities. A high percentage rated them equal to other workers.

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A Disability Can Be An Asset.

Jim Winkler,
Heavy-Equipment Operator

Photography by
Ken Ambrose

MU School Of Medicine News

MARSHALL UNIVERSITY

Compiled from material furnished by the Office of University Relations, Marshall University

NIH Doctor To Speak At Research Day

Students, medical residents and faculty will present results of their research during the first annual Research Day Saturday, March 23.

Dr. Jesse Roth of the National Institutes of Health will provide the keynote address for the event, as well as a pre-Research Day lecture Friday, March 22.

"We have many students and residents who are working on a wide variety of meaningful research projects in the biomedical sciences," said Medical School Dean Lester R. Bryant, M.D. "This is our way of recognizing them and providing a forum for their results.

"We certainly invite our colleagues in the medical community to join us. We think they will find the presentations both interesting and valuable." he added.

According to Dr. Bruce Chertow, Chairman of the Research Day Committee, there will be 26 oral presentations and 15 poster presentations. Results from a wide variety of clinical and laboratory research will be reported.

Research Day will be at the Radisson Hotel in Huntington. Events will begin at 8:15 A.M. and end at 6 P.M., and will include a noon luncheon, at which Doctor Roth will present the keynote address, and a poster presentation coupled with a wine and cheese social hour from 5 to 6 P.M.

Doctor Roth's keynote address is entitled "Evolutionary Origins of Intercellular Communication: Possible Applications to Human Disease."

Doctor Roth's March 22 lecture is entitled "Peptides and Their Receptors: Beyond the Concept of the Lock and Key." It will begin at 7 P.M., and will be in the Don Morris Room of Marshall's Memorial Student Center. A reception will follow.

Doctor Roth is Director of the Division of Intramural Research for the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases at the NIH.

He is President and Chairman of the Board of Directors of the Foundation for Biomedical Research and Education in Bethesda, Maryland, and has served as President of the American Society for Clinical Investigation.

He has received numerous awards for scientific achievement including the highest awards of the American Diabetes Association and the Endocrine Society.

For more information about Research Day, or to make luncheon reservations, call Doctor Chertow at 696-7113.

Videos Available To State Doctors

MU School of Medicine has announced seven new videotapes available to state physicians through the Home Video CME Program.

Two tapes are in the Family Practice Series and five tapes are in a related series on sports medicine.

"This series is designed especially for rural physicians who find it difficult to leave their practices as much as they would like to participate in continuing medical education events, although it certainly can be useful to others as well," said Dr. Ernest Chick, Director of Continuing Medical Education.

"Physicians throughout the state used our first set of tapes, and we're glad to be able to update the series," he added.

Physicians may borrow the VHS or Beta tapes without charge. The tapes meet the criteria in Category 2 of the Physician's Recognition Award of the American Medical Association.

New entries in the series are:

- "Socio-Economic Issues Facing Family Medicine." Dr. E. Harvey Estes, Chairman of Community and Family Medicine at Duke University, highlights the present and future role of family practice. The program was taped live at the first Edwin W. Black Lecture in Family Practice.
- "The Seven Stages of Woman." Dr. Robert A. H. Kinch, Professor of Obstetrics and Gynecology at McGill University, discusses ways of managing the difficult patient as well as highlighting the special health-care needs and problems of women at various stages of their lives.
- "Sports Medicine: Then and Now." Dr. Garron Weiker describes the unique positions of primary care physicians in coordinating the delivery of quality health care to the student athlete. Doctor Weiker is staff orthopedic surgeon at the Cleveland Clinic.
- "The Coach's Perspective on Knee Injuries and the Official's Role in Knee Injury Prevention." Dr. Randy Hunt, Chairman of Health and Physical Education at Glenville State College, and Mike Webb, Chairman of the Official Rules Committee, discuss the communication and cooperation needed in making student athlete health decisions.
- "Arthroscopy." Dr. Anthony Twite, Marietta College Team Physician, discusses knee arthroscopy, which has revolutionized the initial management of acute knee injuries.
- "Ankle Rehab and Ankle Taping." Jerry Wessel, head athletic trainer at Glenville State College, provides insight into the rehabilitation of ankle sprains and common pitfalls in management. Members of Marshall University's sports medicine staff discuss ankle taping strategies for the weekend or competitive athlete.
- "Knee Examination and Knee Bracing." Dan Martin and Ellen Lavery of Marshall's sports medicine staff present a detailed approach using state-of-the-art knee examination techniques.

More information is available from the Office of Continuing Medical Education, 696-7019.

Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

ADD-Vantage®* Vials: 300 mg./2 ml. in single-dose, ADD-Vantage® Vials, in packages of 25.

Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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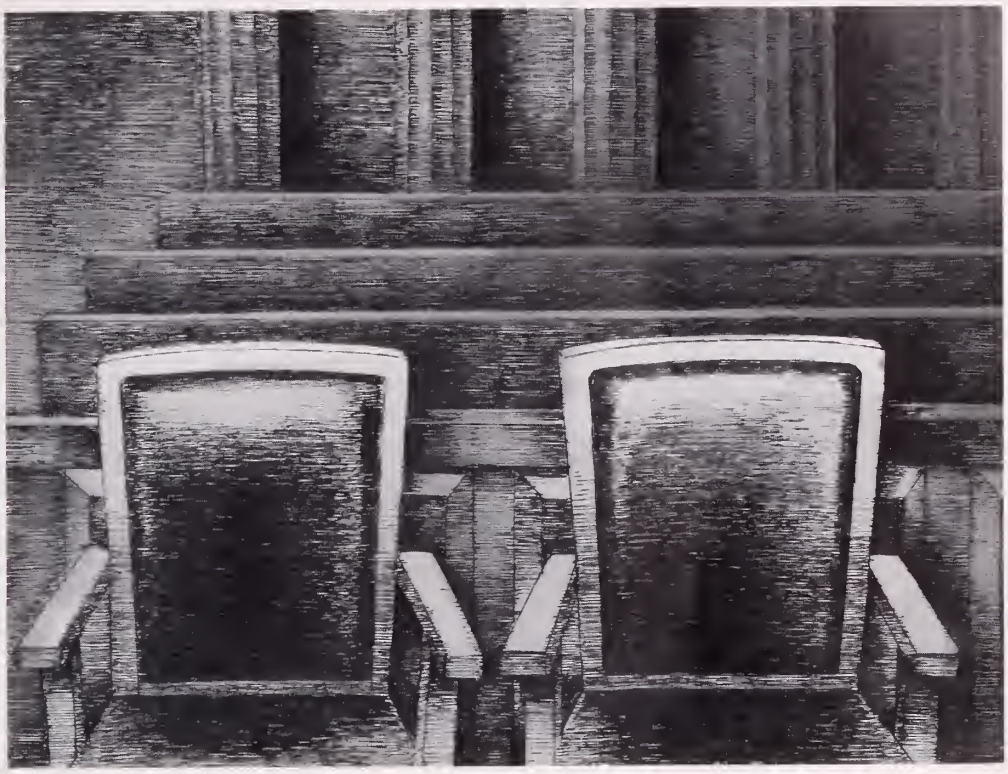

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Obituaries

CARL L. ANDERSON, M.D.

Dr. Carl L. Anderson, Medical Director of Reynolds Memorial Hospital in Glen Dale, died January 15 in a hospital there. He was 53.

A native of Moundsville, Doctor Anderson was in private practice as a physician and surgeon.

He was a former member of the Marshall County Board of Education.

Doctor Anderson, a U.S. Army veteran, was graduated from West Virginia University, attended WVU School of Medicine and received his M.D. degree in 1960 from the Medical College of Virginia.

He served his internship at Akron (Ohio) General Hospital, and his residency in surgery at Ohio Valley Medical Center in Wheeling.

Doctor Anderson was a life member of the WVU Alumni Association and the WVU School of Medicine Alumni Association, and a member of the West Virginia Board of Health, Southern Medical Association, Marshall County Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Bonnie Deagle Anderson; one son, C. Eric Anderson, at home; three daughters, Mrs. Gregg Nogum of Norfolk, Virginia; Heather Anderson of Morgantown, and Erin Anderson, at home; the father and stepmother, Carl G. and Mary E. Anderson of Glen Dale, and one sister, Mrs. Gary Ellis of Charleston.

JAMES P. BAKER, M.D.

Dr. James P. Baker of Lewisburg, who was instrumental in the founding of the Greenbrier Clinic, died January 18 in a Fairlea hospital. He was 85.

Doctor Baker, an internist, was Medical Director of the Clinic from 1948 to 1967.

He was a former Associate Dean of the Medical College of Virginia.

Born in Virginia, he received both his undergraduate and M.D. (1929) degrees from the University of Virginia. He interned at St. Luke's Hospital in New York City, and served his residency at Boston City Hospital.

Doctor Baker was President of the Greenbrier Valley Medical Society in 1950.

He was a Diplomate of the American Board of Internal Medicine, a Fellow of the American College of Physicians, a Member Emeritus of the Clinical and Climatological Society, and President of the Greenbrier County Historical Society.

Doctor Baker was an honorary member of the Greenbrier Valley Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are the wife, Mrs. Louise Rogerson Baker; a daughter, Mrs. Elizabeth Church of Villanova, Pennsylvania, and a son, James P. Baker III of Easton, Maryland.

CLIFFORD A. STEVENSON, M.D

Word recently was received by *The Journal* of the death of Dr. Clifford A. Stevenson of Beckley November 12, 1987, in a hospital there. He was 79.

Doctor Stevenson was an orthopedic surgeon at the Southern West Virginia Clinic in Beckley and at the Beckley Bone and Joint Clinic.

He served with the U. S. Navy from 1939 until his retirement as a Captain in the Medical Corps in 1963. His Navy tour included nine years as Chief of Orthopedic Services at the U. S. Naval Hospital at Portsmouth, Virginia.

Doctor Stevenson was certified by the American Board of Orthopedic Surgery.

Born in Findlay, Ohio, he was graduated from Bowling Green (Ohio) University, and received his M.D. degree in 1936 from Emory University. He interned at Maryland General Hospital in Baltimore, served a general residency at Good Samaritan Hospital in Phoenix, Arizona in 1937-38, a residency in pathology at Denver (Colorado) General Hospital in 1938-39, and residencies in orthopedic surgery in California and North Carolina in 1948-50.

Doctor Stevenson was the sixth recipient of the Distinguished Alumni Award of Bowling Green University.

He was a member of the American Academy of Orthopedic Surgeons and the Tri-State Orthopedic Society, and an honorary member of the Raleigh County Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include a son, Clifford A. Stevenson, Jr., of Harrisburg, Pennsylvania; a daughter, Susan S. Landis of Daniels; two brothers, Donald L. and A. W. Stevenson, both of Yakima, Washington, and two sisters, Nelle O'Connor of Cincinnati and Mary Kathryn Beale of Sarasota, Florida.

County Societies

McDOWELL

The McDowell County Medical Society met January 14 in Welch at the Bonanza Restaurant.

Dr. James Wheeling, Beckley cardiologist, was the guest speaker. His topic was "Intervention in Acute Myocardial Infarction."—James A. Wilson, M.D., Secretary.

MONONGALIA

Dr. Steven Lachance was the speaker for the meeting of the Monongalia County Medical Society January 5.

Doctor Lachance, Director of Renal Transplantation at West Virginia University Medical center, spoke on kidney transplantation.—Robert L. Murphy, Executive Secretary.

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New Members

The following physicians were welcomed in January as new members of the West Virginia State Medical Association:

Mercer

William Harden, M.D., 961 Edgewood Road, Bluefield 24701

Monongalia

Mark J. Kimak, M.D., 99 JD Anderson Drive, Morgantown 26505

Ohio

Raja Devanathan, M.D., 1131 National Road, Wheeling 26003, Respiratory

Richard Feder, M.D., 1300 Market Street, Room 404, Wheeling 26003, Pediatrics

Christopher Marquart, M.D., 7 Locust Avenue, Wheeling 26003

Steven W. Piecuch, M.D., Wheeling Hospital, Medical Park, Wheeling 26003, Pediatrics

Preston

Bernice A. Schwarzenberg, M.D., 150 McDonald Street, Kingwood 26537, Pediatrics

Michael R. Schwarzenberg, M.D., 150 McDonald Street, Kingwood 26537, Family Practice

Raleigh

Mahboob Aamer, M.D., 122 Manor Drive, Beckley 25801, Emergency Medicine

Richard L. Alexander, M.D., Beckley Hospital, 1007 S. Oakwood Avenue, Beckley 25801

Henry Setliff, M.D., PO Box 1797, 302 Carriage Drive, Beckley 25801, Pediatrics

Students

Ronald E. Barebo, 3611 Mount Union Road, Huntington 25701

James L. Bauer, 1070 Chestnut Ridge Road, Morgantown 26506

Susan C. Capelle, Drawer #13, PO Box 6500, Morgantown 26506

Vincent M. Chiodo, PO Box 215, 1304 Pineview Drive, Morgantown 26506

James P. Clark II, 1523½ Spring Valley Drive, Huntington 25704

Diane Edwards, 717 N. Wiley Street, Morgantown 26505

Alan K. Fard, Bon Vista Apartments C-9, Morgantown 26505

Paul B. Fowler, 2244 B Meadows Drive, Morgantown 26505

Craig Fugaro, Apartment 24, 1616 Spring Valley Drive, Huntington 25704

Mary T. Hammond, Apartment H, 437 Inglewood Boulevard, Morgantown 26505

Bradley D. Henry, 137 Sunney Drive, Barboursville 25504

Athena A. Howard, Apartment 1, 101 29th Street, SE, Charleston 25304

William G. Irr, Jr., 204-C Morgann Drive, Morgantown 26505

Jeffrey B. Jackson, Apartment J-412, 1064 Van Voorhis Road, Morgantown 26505

David R. Jones, 1219-15 Pineview Drive, Morgantown 26505

Julie Kang, Apartment K320, 1056 Van Voorhis Road, Morgantown 26505

Russell F. King II, 757 Chestnut Ridge Road #11, Morgantown 26505

Donald G. Klinestiver, Jr., 15 Valley View Drive, Huntington 25701

David A. Law, Apartment 5, 901 Charles Street, Morgantown 26505

Gerardo C. Lopez, Apartment E-7, 1230 Van Voorhis Road, Morgantown 26505

Diane J. Martin, PO Box 492, Milton, 25541

David C. Mendoza, 109 Emerson Road, Clarksburg 26301

Karen L. Morrissette, 957 Maple Drive #12, Morgantown 26505

Brian P. Murphy, 394 North Parkview Drive, Morgantown 26505

James A. Pollack, 1478½ Bison Street, Fairmont 26554

Michael D. Roberts, 1217 Pineview Drive, Morgantown 26505

Anthony W. Thacker, 1523½ Spring Valley Drive, Huntington 25704

Robert B. Wade, 821 Echo Valley, Glen Dale 26038

Jeffrey W. Weiser, 1227-5 Pineview Drive, Morgantown 26505

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Patsy P. Cipoletti, Jr.*

Cabell

Nelio Abrenica
Wynn W. Adam
Ijaz Ahmad
Anthony Bowdler
Homer Lee Christian
James Alan Cochrane
David W. Cook
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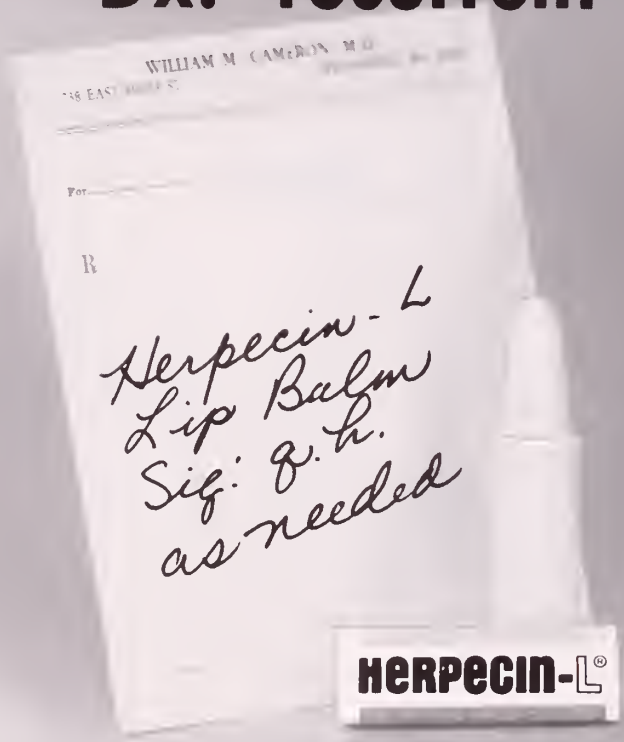

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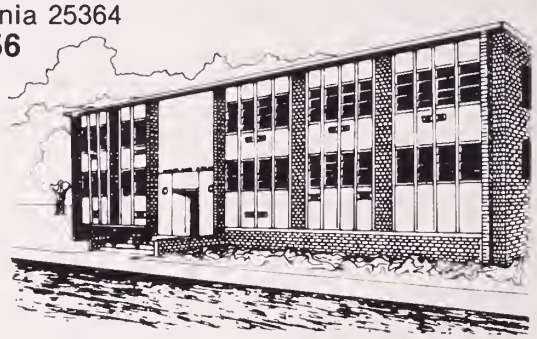

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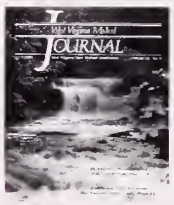

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Depression In A Male Hemophiliac: Unusual Presentation For HIV Infection?

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University Health Service, WVU, Morgantown

Physicians are well aware that HIV infection can be manifested by a variety of infections ranging from ***Pneumocystis carinii*** *to herpes zoster and by constitutional symptoms such as fever, weight loss, fatigue and malaise. The psychiatric manifestations of this illness are less commonly recognized and less readily attributed to HIV infection. This case illustrates that HIV infection may manifest as neuropsychiatric impairment, in the absence of central nervous system infection or overt immunosuppression, and that neurologic or psychiatric sysmptoms may not be an uncommon presentation.*

A 40-year-old man presented to clinic complaining of difficulty sleeping, early morning awakening, fatigue, anorexia, depressed mood, and a seven-pound weight loss over a six-month period. The patient's past medical history was significant for Hemophilia Type A, and he had received several units of Factor VIII concentrate in 1978 and 1980. His history was significant for past infection to Hepatitis B and for chronic active hepatitis, due to non A, non B hepatitis. A diagnosis of depression was made and therapy with amitriptyline (Elavil) was initiated.

The patient was seen in followup one month later. His sleep had improved and he had gained two pounds in weight, but still had a decreased energy level. He was noted to have developed a "silly," somewhat inappropriate affect and some impairment in short-term memory; he was also somewhat confused. He appeared to be inebriated although he denied recent alcohol intake and did not smell of alcohol.

He made repetitive and sterotypical movements with his hands and was noted to have some difficulty performing tandem walk and maintaining his balance when turning. Otherwise, sensory, motor and formal cerebellar testing and deep tendon reflexes were normal. Treatment with amitryptyline was discontinued as a possible contributor to the confusion and deterioration in balance and memory.

When the patient returned to clinic one month later, his mood was less depressed and he was no longer ataxic. Sleep patterns and appetite had further improved but the silly or inebriated demeanor persisted. He habitually consumed one to three beers per day but denied recent intake at that time and, again, did not smell of alcohol. Neurologic examination was normal other than occasional jerky movements of the extremities; he had no asterixis, rest or intention tremor, or problems with rapid alternating movements.

Workup was initiated to rule out hepatic encephalopathy, alcohol intoxication, vitamin deficiency or chronic subdural hematoma. Shortly thereafter he was seen by another physician and treated for oral candidiasis; testing for Human Immunodeficiency Virus (HIV) was considered at this point.

Incontinence, Other Problems

Soon after that he was brought back to clinic following a traffic violation resulting in an accident of which he had no memory. He was admitted to the hospital with a diagnosis of altered mental status to complete the workup which had been previously initiated. By this time he had developed episodes of bowel and bladder incontinence in addition to depression, anorexia, short-term memory loss, inappropriate affect, and mild ataxia.

Admission laboratory tests included a positive serum HIV antibody and a positive Western blot. His white blood count was 3.8 thousand with an absolute lymphopenia at 670 cells/cu.mm. His helper-suppressor T cell ratio (T4/T8) was decreased a 0.16 (normal is greater than one). Lumbar puncture and EEG were performed and were essentially normal. Unfortunately, insufficient spinal fluid was obtained to assay for HIV at this time and the patient refused a repeat tap. His CT scan showed enlargement of the ventricles and sulci, referred to on the radiology report as "nonobstructive hydrocephalus."

He was diagnosed as having AIDS related complex (ARC) with HIV encephalopathy. Formal neuropsychiatric testing confirmed progressive CNS dysfunction, impaired visual spatial skills, and socially inappropriate behavior.

Over the next four months he experienced multiple problems with

TABLE
Adult AIDS Cases by Risk Group, 1987

	United States February, 1987 %	West Virginia August, 1987 %
Homosexual/bisexual	66	50
Homosexual/IV drug user	8	3
Intravenous drug user	16	3
Hemophiliac	1	13
Blood Transfusion	2	22
Heterosexual contact or No risk factor	7	9

labial herpes simplex, oral candidiasis and daily fever spikes. He developed chronic diarrhea but no pathogenic or opportunistic organism was isolated. He became more confused and lethargic and had increasing difficulty in speech and ambulation. Repeat lumbar puncture revealed a CSF positive for HIV. His CT scan findings paralleled his functional problems, showing an increased degree of atrophy. He was admitted to the hospital on multiple occasions for workup of possible opportunistic infection, but all workups were negative.

An application was filed to obtain Retrovir (zidovudine, formerly azidothymidine or AZT) but the patient died prior to receipt of the drug. Several weeks later one of the final cerebrospinal fluid cultures began to grow an atypical Mycobacterium avium intracellular species. At this point, his diagnosis was upgraded from ARC to AIDS, posthumously.

HIV Infection as Direct Cause

There is accumulating evidence that HIV infection can cause a range of neurologic and neuropsychiatric symptoms. These symptoms are a direct result of HIV infection, not due to a secondary infection by opportunistic organisms. Neurologic impairment may be manifested as cognitive or behavioral changes such as decreased memory, difficulty concentrating, social withdrawal and lethargy. Motor disturbances can lead to incoordination, tremor and ataxia, and may eventually lead to paraplegia.

Among patients with AIDS dementia complex, one third will exhibit slowly progressive, mild-to-moderate dementia. Two thirds progress to a severe form marked by eventual mutism, incontinence and paraplegia. The CT scan of these patients shows cerebral atrophy with prominenet sulci and ventricles. Moreover, 10 per cent of HIV-infected individuals may develop neurologic symptoms before developing signs of immunosuppression or AIDS (1).

It is believed that neurologic symptoms occurring in association with HIV infection are due to infection and replication of the virus in brain cells, as HIV is neurotropic as well as lymphotropic. The nature, extent and duration of infection in the CNS is not known. Little is known about when the virus enters the nervous system following initial infection, but CNS infection is thought to persist for the life of the patient, and acute meningitis occurring in association with seroconversion to HIV has been described (2).

"There is accumulating evidence that HIV infection can cause a range of neurologic neuropsychiatric symptoms."

Hemophiliacs may be at inordinate risk of HIV infection. While less than two per cent of AIDS cases occur among hemophiliacs (3), it is estimated that 70-85 per cent of patients who received Factor VIII concentrate between 1979 and 1985 are seropositive (4). The incidence of AIDS is estimated to be 3.6/1,000 among patients with Hemophilia A and 0.6/1,000 among patients with Hemophilia B (4). There appears to be a lower risk of HIV infection in patients treated with fresh frozen plasma or cryoprecipitate compared to Factor VIII concentrate, although seroconversion has occurred with all preparations. For this reason the CDC recommends that newly diagnosed hemophiliacs receive cryoprecipitate for Factor VIII replacement or fresh frozen plasma for Factor IX replacement. Desmopression is suggested in mild or moderate Hemophilia A. Heat treatment of Factor VIII concentrate can lower but not eliminate the risk of HIV transmission (5).

Epidemiology Differs

Physicians should be aware that the epidemology of AIDS cases in West Virginia differs from that reported for the United States in general, in that there are proportionately fewer cases in homosexuals/bisexuals or intravenous drug users and thus proportionately more cases seen in hemophiliacs and blood transfusion recipients (Table 1).

Summary

In summary, human immunodeficiency virus can cause significant morbidity even prior to the development of overt immune deficiency, and HIV disease may present not only with opportunistic infection, adenopathy, and constitutional symptoms, but also with neuropsychiatric impairment.

Generic/Trade Names

Generic drugs (with trade names in parentheses) mentioned in this article are amitriptyline (Elavil) and zidovudine, formerly azidothymidine or AZT (Retrovir).

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Fetus In Fetu: Case Report

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Distinction of fetus in fetu from teratoma is necessary because of the malignant potential of teratomas. No cases of malignant degeneration of fetus in fetu have been reported.

Definite radiographic differentiation of fetus in fetu from teratoma can be made if a portion of or an entire axial skeleton along with other well-formed bony elements can be identified. Our case showed well-formed bony elements but without a concise axial skeleton. Fetus in fetu was suspected and later confirmed pathologically.

A 16-month-old white male was referred to West Virginia University Hospital for further evaluation of a left upper quadrant abdominal mass noted on outside examination after having presented with a one-month history of vomiting. Referral films of the abdomen showed a soft tissue mass in the left upper quadrant with associated calcific structures. Some of these structures appeared to resemble multiple teeth arranged in an orderly fashion on an alveolar-like ridge. Another radio dense structure appeared to be an odd long bone which was attached to a flat bone resembling a scapula. Other bone-like structures could be identified as well. There was also a question of the mass extending through the diaphragm and into the chest (Figure 1).

The patient showed no other signs or symptoms, and no weight loss was reported. The past medical history revealed birth weight to be seven pounds, seven ounces, full term by spontaneous vaginal delivery after a normal pregnancy, and uneventful neonatal course. Growth and development were normal. The family history was non-contributory.

Figure 1. Plain film of abdomen with well-formed bony structures in left upper quadrant. Superior aspect of mass appears to extend through the diaphragm.

Physical Examination

Physical examination showed a protruding left upper abdominal mass, which was firm on palpation. The soft tissue mass appeared to extend from the left costal margin to the level of the umbilicus and was slightly mobile.

The patient had chest and abdominal films which showed the previously described radiographic findings. Abdominal ultrasound was performed revealing a heterogeneous mass superior to the left kidney and medial to the spleen. There was no involvement of these structures. The patient was then taken to surgery.

Surgery

A left upper quadrant transverse incision was made. The mass was identified and noted to extend cephalad through the diaphragm. There were filmy adhesions to the liver, omentum, spleen and stomach. However, no firm attachments or evidence of invasion were noted with any of these structures. The mass was, however, fairly firmly attached to the diaphragm with palpable extension into the chest. The lower lobe of the left lung was adherent to the mass but easily freed. The mass was removed and the diaphragm was repaired. The postoperative course was uneventful and the patient was released five days later.

Macroscopic Findings

Gross pathology revealed a 13.2 x 6.5 x 5.5 cm. irregularly ovoid encapsulated mass weighing 220 grams (Figure 2a, b). A circular stricture was noted at the upper pole which created a 4.5 x 3.0 x 3.0 cm. hemispheric cap. Skeletal muscle fragments were attached to this region of stricture. A small pedicle or cord was noted extending through an opening into the capsule. The pedicle was noted to consist of a radially arranged apparent fibrovascular cord which extended to the central aspect of the mass.

Longitudinal cross sectioning showed a fetiform mass which was almost entirely encased with a layer of thick adipose tissue. Approximately one to three mm. of yellow-white keratinous debris covered the thin layer of skin overlying the adipose tissue. Underneath the adipose tissue were multiple discernable tissue types. Long bone segments with marrow cavities were noted along with other bony structures representing a portion of a vertebral column. The spaces between these apparent vertebral bodies consisted of cartilaginous material. Articular surfaces of the long bones were covered by chondroid tissue. A short segment of bowel was noted with its lumen filled with soft green-brown material.

Microscopic Findings

Sections of skin showed a thin epidermis covered by a thick orthokeratotic layer. The dermis appeared normal. A thin layer of subcutaneous fat covered what appeared to be a thick layer of brown fat beneath. Sections through the long bone showed hyalin cartilage and bone with active hematopoeisis in the medullary space. The vertebral bodies were noted to have active hematopoeisis as well. Cross sections of the bowel segment showed intact, well developed muscular walls, neural plexi, and

Figure 2a. Gross specimen with capsule in place.

Figure 2b. Radiograph of specimen showing well-informed bones and teeth. No definite vertebral column was identified radiographically.

mucosa with goblet cells, Paneth cells and crypts. No other discreet organ systems could be identified.

Discussion

Fetus in fetu is a term used to describe a rare mass occurring in infants which satisfies specific criteria. Proof of the genuine nature of fetus in fetu requires at least unequivocal radiographic or dissectional demonstration of a part or a whole of a vertebral axial skeleton, this finding being reinforced if other appropriately situated bones or organs are present (1). Distinction between fetus in fetu and teratoma is important because teratomas have malignant potential and fetus in fetu does not.

There are two major theories relating fetus in fetu and teratomas. The first is that fetus in fetu is a component of the general category of teratomas and teratomas are actually the result of a modification of twinning (2). There have been several cases where multiple incorporated twins were reported within the same patient (3,4), and another case which demonstrated a fetus in fetu and a malignant teratoma in close association with one another appearing concurrently within the same patient (5). The second theory suggests that fetus in fetu actually represents a diamniotic, monochorionic, monozygomatic twin of its bearer and that teratomas are separate entities entirely, behaving as neoplasms (1,6,7). Chromosomal analysis of incorporated twins has shown that both the host and twin originate from the same zygote (8). Willis pointed out the fact that since teratomas have no vertebral axis they do not pass through the primitive streak stage, unlike fetus in fetu and, therefore, were of different etiologies. The etiology of fetus in fetu versus that of teratoma will no doubt continue to be debated.

Differentiation

Several points differentiating fetus in fetu and teratoma include the finding that, microscopically, fetus in fetu shows well-differentiated tissue with development of portions of organ systems while teratomas demonstrate multiple tissue types of differing maturity and do not show organized organ development (7). Some believe that fetus in fetu is solely a retroperitoneal tumor (1,6) while teratoma is known to occur in multiple regions including the pelvis, gonads, retroperitoneum, mediastinum, and cranial vault. However, several cases of presumed incorporated twins have been described in extra-retroperitoneal sites including the pelvis (9), the mesentery of the bowel (10), intracranially (4), and the scrotal sac (11).

The radiographic demonstration of fetus in fetu depends on the identification of a part or whole of a vertebral axial skeleton. If a vertebral column is not identified radiographically, then final identification must be obtained histopathologically. Our case did not show definite radiographic evidence of a vertebral axial skeleton; however, because of the well-arranged bony structure, it was felt that this tumor most likely represented a fetus in fetu. This was confirmed histopathologically by finding elements of a vertebral axis. When the diagnosis of fetus in fetu is made radiographically it is recommended that the tumor be removed surgically because of the potential for infarction, infection or obstruction. It is not believed, however, to be a surgical emergency. The tumor capsule can be removed or left in place (12).

Conclusion

In conclusion, fetus in fetu is a rare mass in an infant distinguished from teratoma by the presence of a portion of or a whole vertebral axial skeleton with appropriately arranged organ systems. It is felt that surgical removal is necessary because of potential complications. Fetus in fetu has no known malignant potential. Its diagnosis can be made radiographically by identification of a portion or a whole of a vertebral axial skeleton. Definite radiographic diagnosis was not made in our case; however, a presumptive diagnosis of fetus in fetu was justified by the presence of the well-formed bony structures, and this diagnosis was confirmed histopathologically.

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Primary Malignant Melanoma At Charleston Area Medical Center, 1966-1986

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We reviewed 182 cases of stage I malignant melanoma identified at Charleston Area Medical Center (CAMC) from 1966-1986. Of the 182 cases, 54 per cent were female. The five-year survival rates were 74 per cent for women and 68 per cent for men. With respect to the site of the lesion, 45 per cent occurred on the extremities, 22 per cent on the head and neck, and 33 per cent on the trunk.

The five-year survival rates based on tumor thickness were 90 per cent for lesions less than 1.50 mm, 83 per cent for lesions 1.50-2.50 mm, 60 per cent for lesions 2.51—4.0 mm, and 51 per cent for lesions greater than 4.0 mm in depth. The five-year survival was 59 per cent for patients with ulcerated lesions compared to 80 per cent for patients without ulcerated lesions.

The time period from initial presentation of the lesion to the time medical attention was sought was noted in 50 per cent of the patients. The five-year survival for those waiting less than six months and more than six months was 80 per cent and 77 per cent, respectively.

In this series, lower survival rates were associated with lesions of increasing thickness, ulceration, and head and neck location.

Introduction

Primary malignant melanoma (stage I) by definition is localized melanoma with no clinical evidence of metastasis in regional nodes or at distant sites. Over the past 10 years, studies on patients with primary cutaneous malignant melanoma have identified pertinent predictors of survival including sex, site of the lesion, thickness of the lesion, and presence or absence of tumor ulceration (1,2). Most of these studies were carried out at large metropolitan treatment centers. Few studies, however, have been performed at community-based referral centers. We, therefore, retrospectively reviewed the clinical and pathological characteristics of 182 cases of primary malignant melanoma identified at CAMC between 1966 and 1986.

Methods

The patients' medical records, pathology reports and tumor registry abstracts were used in the data collection process. Pertinent data collected from each case included age, sex, date of diagnosis, site and thickness of the lesions, presence or absence of ulceration of the lesion, treatment, cause of death, time period between the initial presentation of the lesion and subsequent initial medical evaluation, and overall survival.

The pathology slides of those cases diagnosed prior to 1977 were reviewed by a pathologist to measure the thickness of the lesion. This data was not routinely reported prior to 1977. Patients were assigned to one of five groups based on tumor thickness according to Breslow's classification (4). These were as follows: $<.76$ mm, 0.76-1.50 mm, 1.51-2.50 mm, 2.51-4.0 mm, and $>$ 4.0 mm. The followup of patients in this study was conducted through the CAMC tumor registry.

The five- and 10-year survival rates were calculated at three-month intervals using the life-table analysis (10).

The clinical and pathological information was computerized to facilitate data management. When appropriate, chi-square analyses were employed to evaluate differences between and among variables. Associations between prognostic variables and survival rates were tested using chi-square and Fishers exact test.

Results

Of the 182 cases of stage I melanoma identified, 83 were males (46 per cent) and 99 were females (54 per cent) (Table 1). The patient age ranged from 11 to 91 years. The median age at diagnosis was 48 years. The overall survival for stage I melanoma was 72 per cent at five years and 63 per cent at 10 years (Table 2). Females had a 74-per cent five-year survival rate and males a 68-per cent five-year survival rate.

Twenty-one per cent of the lesions were located on the upper extremity, 24 per cent on the lower extremity, and 55 per cent on the axial region (i.e., 22 per cent on the head and neck and 33 per cent on the trunk). The majority of extremity lesions (73 per cent) were found in women while the majority of axial lesions (60 per cent) were found in men. The five-year survival rates were 82 per cent for extremity lesions, 70 per cent for trunk lesions, and 56 per cent for head and neck lesions.

TABLE 1
Clinical and Pathological Data

Clinical	*Male*	*Female*	*All Pts*	*Number of Patients With Data Available*
Number of Patients	46%	54%		182
Year of Diagnosis				
1966-1970			15%	182
1971-1975			21%	
1976-1980			28%	
1981-1985			36%	
Age (median)			48 years	182
Primary Lesions Site				
Upper extremity	8%	13%	21%	182
Lower extremity	5%	19%	24%	
Head and Neck	11%	11%	22%	
Trunk	22%	11%	33%	
Tumor Thickness (mm)				
<0.76	12%	15%	27%	145
0.76—1.50	11%	11%	22%	
1.51—2.50	10%	10%	20%	
2.51—4.0	4%	6%	10%	
>4.0	12%	9%	21%	

TABLE 2
Survival Data

	Survival Rates 5-year	*10-year*
Overall Survial	72%	63%
Sex		
Male	68%	59%
Female	74%	66%
Primary Lesion Site		
Extremity	82%	75%
Trunk	70%	62%
Head & Neck	56%	34%
Tumor Thickness (mm)		
<1.50	90%	76%
1.50—2.50	83%	61%
2.51—4.0	60%	55%
>4.0	51%	46%
Ulceration		
Present	59%	52%
Absent	80%	66%
Time from appearance of the lesions until seeking medical attention.		
Median delay 6 months.		
Patients waiting <6 mo	80%	
Patients waiting > 6 mo	77%	

The median tumor thickness was 1.50 mm. Twenty-seven per cent of the lesions were less than 0.76 mm, 22 per cent were .76-1.50, 20 per cent were 1.51-2.50, 10 per cent were 2.51-4.0, and 21 per cent were greater than 4.0 mm. Lesions less than 1.50 mm were found in 51 per cent of females and 47 per cent of males.

The presence or absence of ulceration was recorded in 73 per cent of cases. Ulcerated lesions were noted in 32 per cent of females and 40 per cent of males. The five-year survival rate of patients with ulcerated and non-ulcerated lesions was 59 per cent and 80 per cent, respectively. Eight-four per cent of the ulcerated lesions were greater than or equal to 1.50 mm in depth.

The initial treatment for patients in this study was wide excision alone for 43 per cent of cases, wide excision with skin grafting for 37 per cent, and elective regional lymph node dissection (RLND) for 20 per cent of the cases. Fifty-five per cent of patients treated with wide excision with or without skin grafting had lesions less than 1.50 mm while 70 per cent of patients treated with elective RLND and wide excision had lesions greater than 1.50 mm. The five-year survival rate for patients initially treated by wide excision with or without skin grafting alone and patients treated with elective RLND and wide excision was 74 per cent and 71 per cent, respectively.

The time period between the initial presentation of the lesion or change in a pre-existing lesion and subsequent initial medical evaluation was noted in 82 cases (45 per cent). The median time period was six months (for both males and females). The five-year survival was 77 per cent for those waiting more than six months and 80 per cent for those waiting six months or less.

Discussion

The anatomical site of the melanoma is an important clinical feature in predicting survival. Patients with extremity lesions had a significantly better survival rate than those with axial lesions ($p < 0.05$).

An important sex difference existed in site distribution. Women had considerably more lesions on the extremities, particularly the lower limbs, while men had a significantly increased number of axial lesions ($p < 0.01$). Overall, melanomas were evenly distributed among the four major anatomical locations. There were no differences in depth of the lesion among the four anatomic sites.

The most important prognostic factor in stage I melanoma is tumor thickness (2,4). In our series, patients with lesions less than 1.50 mm had superior survival compared to those with lesions greater than or equal to 1.50 mm ($p < 0.05$). Approximately half of the patients in this study had melanomas less than 1.50 mm in thickness. Although men have been shown to present with thicker lesions than women (1,2,7), the number of thin and thick lesions were similar in both men and women in this study.

Ulceration has been a poor prognostic factor in regard to survival in several studies (2,6). In our series, patients with ulcerated lesions had a

significantly poorer five- and 10-year survival than those without ulceration. There was a significant correlation between ulceration and increased tumor thickness ($p < 0.01$).

The surgical treatment of primary melanoma patients with elective RLND has long been a subject of controversy. Recent studies have shown that patients with thin (< 0.76 mm) and thick (≥ 4.0 mm) lesions did not benefit from elective RLND, while those with intermediate thickness (0.76 to 3.99 mm) had significantly improved survival if their initial treatment included an elective RLND (2). These studies, however, have been challenged by other studies which concluded that elective RLND had no effect on survival (7,8). In this limited study, there was no significant difference in survival between those who did and those who did not undergo elective RLND.

The time delay between discovery of the initial lesion and subsequent initial medical evaluation and its influence on survival was of interest. The five-year survival for those waiting six months or less and for those waiting longer than six months was not statistically different. This finding suggests that perhaps the inherent biological behavior of the tumor rather than the treatment may be the major factor in survival in primary malignant melanoma.

Although not statistically significant, there was a trend towards a better five-year and ten-year survival in women than men in this study. This difference can be in part explained by the greater proportion of extremity lesions in women than in men.

One of the inherent limitations of our study was the small number of patients available for analysis. However, several clinical-pathological variables such as tumor thickness, tumor site, and tumor ulceration were found to be significant predictors of survival in our study as well as others. The absence of statistical significance of other factors in our study; e.g., elective RLND and wide excision versus wide excision alone, might be explained by the small population investigated.

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Medical Grand Rounds

West Virginia University Medical Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Acute Rheumatic Fever

Discussant:

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Case presented by:

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Acute rheumatic fever (ARF) is a non-suppurative sequela of upper respiratory tract infection with Group A ***Streptococcus.*** *Although the incidence has fallen dramatically throughout this century in the United States, some recent outbreaks suggest there may be a resurgence of ARF. ARF is characterized by combinations of carditis, arthritis, chorea, erythema marginatum, and subcutaneous nodules, the "major manifestations" according to the modified Jones' criteria (revised) as well as a variety of minor manifestations.*

Evidence of recent infection with Group A ***Streptococcus*** *must be present to make the diagnosis of ARF. The differential diagnosis is broad and includes rheumatoid arthritis, other connective diseases, infective endocarditis, septic and viral arthritis, and many other entities.*

Morbidity and morality are related mainly to the late development of rheumatic heart disease with valvular damage.

Prevention of recurrent streptococcal infection has been shown to prevent subsequent attacks of ARF and is of utmost importance.

Patients who have had previous rheumatic fever with heart involvement should receive penicillin prophylaxis continuously, perhaps for life.

Case Presentation

A 29-year-old female was well until two months before admission when she developed purulent tonsillitis. She was treated with ampicillin for 10 days. Several weeks later, her sore throat recurred, and she was treated with another 10-day

course of ampicillin. Two weeks later, she developed red, swollen, painful ankles.

She was admitted to the hospital where her temperature was 99.6°F orally. Her throat was erythematous with swollen tonsils; lungs were clear, and a new grade II/VI systolic ejection murmur was noted on cardiac examination. Blood, throat, and cervical cultures were negative. Her white blood cell count was 10,900/mm³ with a normal differential. Erythrocyte sedimentation rate was 53 mm/hour, and antistreptolysin 0 titer was >2,500 Todd units/ml. Chest x-ray was normal. Anti-nuclear antibody and rheumatoid factor were negative. Electrocardiogram showed nonspecific ST-T wave changes.

She was given benzathine penicillin, 1.2 million units, intramuscularly, and salicylate therapy was begun. For several days, the patient had daily temperatures up to 101°F and she developed substernal pleuritic chest pain. Several days later, her wrists and hands swelled also. On salicylates, her joint swelling and pleuritic chest pain decreased, and she was discharged home 10 days later.

Three days later, her pleuritic chest pain worsened. She became short of breath, and pain and stiffness developed in her right knee. She was readmitted to the hospital where a room air blood gas showed PO_2 of 53 torr. Examination now revealed bilateral pleural friction rubs and an effusion in the right knee. A ventilation-perfusion scan was interpreted as "low probability for pulmonary embolism." Chest x-ray showed left pleural effusion and consolidation at the left base. Due to continued dyspnea, the patient was transferred to West Virginia University Hospital for further management.

Her past medical history was significant for acute rheumatic fever in 1979 and multiple episodes of pharyngitis. She was a housewife with two children ages seven years and 18 months.

Over the next several days, the patient remained febrile and short of breath. Bronchial breath sounds were heard at the left lung base. The grade II/VI ejection murmur was heard at the lower left sternal border. She had no rash nor signs of congestive heart failure. A small effusion was present in the right knee, and multiple small joints in the fingers were painful with movement. Sedimentation rate rose to 126 mm/hr. An echocardiogram showed normal left ventricular function and a small pericardial effusion. Chest x-ray continued to show a left lower infiltrate with effusion.

The patient was unable to produce any sputum for Gram stain and culture. She was treated with empiric erythromycin, and her salicylate dose was increased. Over the next several days, her chest pain, dyspnea, and joint symptoms subsided, and she was discharged home without complication. She was placed on penicillin prophylaxis in the form of penicillin VK 250 mg twice daily, indefinitely.

"Because of the apparent resurgence in ARF in the United States at present, continuous lifetime prophylaxis with penicillin should be considered for all patients with the previous history of ARF or rheumatic heart disease . . ."

Comment

The patient presented had a recurrent attack of acute rheumatic fever, characterized by carditis and arthritis. Her high titer of antistreptolysin 0 antibodies provided definite evidence of recent streptococcal infection. Her acute illness resolved with the aspirin therapy and rest. More importantly, the risk of future attacks of ARF in this patient should be lessened with penicillin prophylaxis which helps prevent recurrent streptococcal infections.

Acute rheumatic fever (ARF) is a delayed non-suppurative sequela of upper respiratory infection due to Group A Streptococcus, also known as *Streptococcus pyogenes*. It is a disease characterized by inflammatory lesions involving primarily the heart, joints, subcutaneous tissue, and the central nervous system. Damage to the heart valves may result, leading to cardiac failure and possible death many years after the acute attack. ARF is extremely variable in its presentation.

The case presented here illustrates many of the important features of acute rheumatic fever, a "classic" medical disease that may be increasing in incidence in the United States.

History

The history of acute rheumatic fever (ARF) is intriguing because of the disease's seemingly unrelated manifestations. Guillaume de Baillou ("Ballonius") (1538-1616) first distinguished acute arthritis from gout. Jean-Baptiste Bouillard (1796-1881) is known in the western world as the "father of rheumatic heart disease." He described the carditis of ARF in detail and associated the typical arthritis. Walter Butler Cheadle, in his Harvean lectures (1889), took the various manifestations of the rheumatic state and put them into the syndrome we know today as ARF. In 1904, Ludwig Aschoff described the specific rheumatic lesion in the myocardium known as the "Aschoff body."

In the late 1920s, the American, Rebecca Lancefield, classified the major pathogenic strains of streptococci based on the antigenic cell wall polysaccharide. In addition to distinguishing between Group A, Group B, and other streptococci, she established the crucial role of the M protein as a virulence factor of the Group A *Streptococcus*. Numerous investigators in the United States and United Kingdom including Rammelkamp, Wannamaker, Stollerman, and others clarified the epidemiology of the disease and set the stage for the prevention of ARF through the use of antibiotics.

Etiology

Several important lines of evidence support the Group A streptococcal etiology of ARF (1,2). First, clinical experience has shown that most patients with ARF give a history of preceding pharyngitis. In patients without a definite history, evidence of recent streptococcal infection is nearly always present as measured by a high titer of antistreptococcal antibodies. Finally, continuous antimicrobial prophylaxis which prevents intercurrent Group A streptococcal infection also prevents ARF recurrences in rheumatic patients.

The Group A *Streptococcus* has several virulence factors which have enabled it to produce disease successfully in the human host (1). The most important virulence factor is present in the cell wall, namely the M protein which resists phagocytosis. Specific antibodies formed against the M protein provide type specific immunity in man, confirming the antigenicity of this protein. Other virulence factors include the hyaluronic acid capsule which also retards phagocytosis, and lipoteichoic acid present in the cell wall which plays a role in adherence to human epithelial cells.

The Group A *Streptococcus* also produces several extracellular products. Erythrogenic toxin is present in those strains that produce the classic rash of scarlet fever. Other products include the hemolysins including Streptolysin O, against which antibodies form and provide one of the most useful measurements of recent streptococcal infection.

Finally, DNAses, hyaluronidase, and streptodornase are all extracellular products which are antigenic. Antibodies to these proteins can be additional measures of recent streptococcal infection.

The mechanism by which Group A *Streptococcus* produces rheumatic fever is not known. Possible explanations have included: (1) direct tissue invasion by *S. pyogenes;* (2) toxic effect of streptococcal products, especially the streptolysins; (3) serum sickness-like reaction involving antigen-antibody complexes; and (4) autoimmunity. Most recent research has focused on the concept of autoimmune phenomena because of the identification of antibodies in the sera of patients with ARF or rheumatic heart disease that react with the human heart and have been termed "heart-reactive antibodies." Streptococcal antigens cross reactive with human heart tissue have been localized to the streptococcal cell wall or cell membranes by different investigators (3,4,5,6).

Because of the known familial aggregation of ARF cases, the possibility of a predisposition to rheumatic attacks has been suggested but not confirmed. In one study, there was a highly statistically significant association between HL-A5 antigen and the degree of blastogenic response of human lymphocytes to streptococcal products (7). These data suggest that immune responsiveness to certain streptococcal antigens may be under genetic control and may be important in determining which patient develops ARF after an immunologically significant streptococcal infection.

"Because of the known familial aggregation of ARF cases, the possibility of a predisposition to rheumatic attacks has been suggested but not confirmed."

Evidence supporting this hypothesis comes from a study of rheumatic subjects in New York City and Bogota, Colombia (8). A B-cell alloantigen was present in 80 per cent of these subjects but in <20 per cent of the control subjects.

In a study by Ayoub et al. (9), a higher frequency of HLA-Dr2 phenotype was seen in black patients with rheumatic fever compared to controls while white patients had a higher frequency of the HL-A Dr4 haplotype.

Epidemiology

Rheumatic fever remains an important cause of morbidity and mortality worldwide. It has been estimated that rheumatic heart disease is the cause of 25-40 per cent of all cardiovascular disease in developing nations (10). There is a clear relationship between Group A streptococcal pharyngitis and ARF, especially in closed populations. Studies have shown that in the epidemic setting, about three per cent of patients with exudative pharyngitis develop ARF. In addition, a strong ASO antibody response is associated with high attack rates of rheumatic fever (11).

Approximately one third of the cases of ARF occur after asymptomatic streptococcal infection. Crowding is an important predisposing condition in epidemics. Rheumatic fever is most frequent in children 6-15 years of age, but the disease can occur well into adulthood.

The incidence of ARF had been declining in the United States since the turn of the century. In the 1960s, for example, there were an estimated 24-60 cases of ARF/100,000 compared to the 1970s with an incidence of 0-1.5 cases/100,000 (2,12,13,14). Certain strains of Group A *Streptococcus* are strongly associated with ARF epidemiologically while others are not (15). In the past several years, there have been several reports in the United States of an apparent resurgence of acute rheumatic fever (16). In a report by Veasy et al. (17), an outbreak of ARF was reported from Utah which occurred in 1985 and 1986, representing an eight-fold increase over the average incidence of ARF. The children were mainly from white, middle-class families who had above-average incomes. During this outbreak, certain unusual mucoid M-types of Group A *Streptococcus,* mainly type 18 and type 3, were isolated in the community.

In a recent pediatric series of ARF patients in Ohio (18), the mucoid M type 18 of Group A *Streptococcus* was found to be the prevalent serotype isolated concurrently in the community from patients with

pharyngitis. These data suggest that the predominant "rheumatogenic" strains of the organism may be changing and may be responsible in the future for a rise in the number of cases of ARF.

Pathology

Pathological findings of ARF include exudative and proliferative inflammatory lesions of heart, joints, blood vessels and tissues. In the early stages, lymphocytic and fibrinoid deposition occurs. This is followed by the myocardial Aschoff nodule which consists of an area of central necrosis surrounded by mononuclear and multinuclear cells. Heart involvement may include pericarditis, myocarditis, and/or endocarditis. On valvular lesions, cellular infiltration occurs in the leaflets and chorda tendinae, with thickening, deformity and ultimately valvular stenosis or insufficiency possible after the healing process.

TABLE 1

Jones Criteria for ARF (Revised)

MAJOR	MINOR
Carditis	Fever
Polyarthritis	Arthralgia
Chorea	Prior Rheumatic Fever or Rheumatic Heart Disease
Erythema Marginatum	↑ Sed Rate or (+) C-Reactive Protein
Subcutaneous Nodules	Heart Block

Two major, or one major and two minor criteria needed, PLUS evidence of preceding Group A *Strep.* infection.

Clinical Manifestations

The clinical manifestations of acute rheumatic fever are best described by the revised Jones criteria (19) (Table 1). The major criteria include carditis, polyarthritis, chorea, erythema marginatum, and subcutaneous nodules. Minor criteria include the presence of fever, arthralgia, prior ARF or rheumatic heart disease, increased sedimentation rate or positive C reactive protein, and a prolonged PR interval on electrocardiogram.

The presence of two major criteria or one major plus at least two minor criteria establishes a diagnosis of acute rheumatic fever but only if there is definite evidence of preceding Group A streptococcal infection. Such evidence includes an increase in antistreptolysin O (ASO) or other streptococcal antibody titer, a positive throat culture for Group A *Streptococcus* or recent scarlet fever. The absence of evidence of recent streptococcal infection makes the diagnosis doubtful except when rheumatic fever is discovered after a long period from the preceding infection as may occur with Sydenham's chorea.

The latent period between streptococcal infection and the first manifestations of ARF averages 19 days with a range of one to five weeks. Most attacks, especially in adults, begin with polyarthritis and may be preceded by abdominal pain. In first attacks of ARF, arthritis occurs in 75 per cent of patients, carditis in 40-50 per cent, chorea in 15 per cent, and subcutaneous nodules and erythema marginatum both in less than 10 per cent.

Carditis is the only manifestation that causes disability or death in ARF. It is usually a pancarditis but may also be asymptomatic. The carditis occurs usually within the first three weeks of an attack of ARF. Clinical signs of rheumatic carditis include a new organic heart murmur, cardiac enlargement, congestive heart failure, pericardial friction rubs, and signs of pericardial effusion. Characteristic heart murmurs of rheumatic carditis include: (1) high-pitched blowing holosystolic apical murmur of mitral regurgitation; (2) low-pitched apical mid-diastolic flow murmur (Carey-Coombs murmur); and (3) high-pitched decrescendo diastolic murmur of aortic regurgitation (1).

Joint involvement in ARF is the most common manifestation in adults and ranges from arthralgias to frank arthritis. There is an inverse relationship between the severity of joint involvement and the risk of carditis. Joints most frequently involved include knees, ankles and wrists. The arthritis is classically migratory, and the entire duration of polyarthritis subsides usually within four weeks, leaving no permanent damage.

Sydenham's chorea ("St. Vitus' dance") is the neurological disorder characterized by emotional lability, muscular weakness and rapid involuntary, purposeless movements. Individual attacks may last two to four months. Chorea is more common in girls after puberty. Chorea may be suspected first by a school teacher because the child is thought to be exhibiting behavioral or attention problems.

Subcutaneous nodules are usually associated with severe carditis. They are usually found over bony surfaces and tendons, and usually persist one to two weeks. Erythema marginatum is a non-painful, non-pruritic erythematosus rash which usually occurs on the trunk or proximal extremities. The individual lesions are usually fleeting and a vasomotor phenomenon. Although individual lesions may appear and resolve in minutes to hours, the process may go on for weeks to months.

TABLE 2

Differential Diagnosis of ARF

Rheumatoid Arthritis	Rubella Arthritis
Juvenile Rheumatoid Arthritis	Septic Arthritis
Systemic Lupus	Infective Endocarditis
Erythematosus	Viral Myocarditis
Serum Sickness	Early Henoch-Schoenlein Purpura
Sickle Cell Disease	

Pulmonary parenchymal abnormalities in ARF have been reported but are not specific enough to indicate ARF. For example, pulmonary edema, atelectasis, and pulmonary embolism with thrombosis have been strongly associated with ARF. In addition, a rheumatic pneumonia has been described, as may have occurred in the patient presented here; however, it is unclear if this "pneumonia" is a distinct pathological entity.

The average duration of an attack of ARF untreated is approximately three months. "Chronic rheumatic

has been defined by Stolerman by the following criteria for continuing clinical activity: joint symptoms, new organic murmurs, change in heart size, congestive heart failure without valvular disease, subcutaneous nodules, sleeping pulse rate greater than 100 beats/minute, erythema marginatum, chorea, positive C reactive protein test, and rectal temperature of 100.4°F or higher for three or more consecutive days.

The differential diagnosis of ARF is extensive (Table 2). Other diseases to consider include rheumatoid arthritis, juvenile rheumatoid arthritis, systemic lupus erythematosus, serum sickness, sickle cell crisis or cardiomyopathy, rubella arthritis, septic arthritis, infective endocarditis, viral myocarditis, early Henoch-Schonlein purpura, and, rarely, sarcoidosis, leukemia and lymphoma.

The diagnosis of ARF is a clinical one based on the revised Jones criteria plus evidence of recent streptococcal infection. Such evidence may include a recent documented episode of streptococcal pharyngitis, scarlet fever, or presence of an elevated serum titer of antistreptococcal antibodies.

An ASO titer of >200 Todd units/ml is indicative of recent streptococcal infection with titers >300 the best evidence. In an equivocal case, other streptococcal antibody tests should be performed such as anti-DNAse B or antihyaluronidase. A slide hemagglutination test (Streptozyme) is suitable for office use and measures simultaneously antibodies of several streptococcal extracellular antigens. An anti-Streptozyme titer of <100 makes ARF very unlikely (except for the patient with pure chorea or isolated carditis). Titers of 100-200 are equivocal while titers of 300 or greater are strongly indicative of recent streptococcal infection.

Therapy

The purposes of therapy in the acute stage of rheumatic fever are to control the inflammatory state and to decrease fever. The drugs used are the salicylates and corticosteroids. Unfortunately, neither therapy has been shown to prevent or decrease the development of chronic rheumatic heart disease (20). For patients with mild disease such as arthralgias or mild arthritis with no carditis, analgesics alone are recommended (1). In moderate or severe arthritis without carditis, or for carditis without congestive heart failure, aspirin 90-100 mgs/kg/day for two weeks is recommended. For the following six weeks, 60-70 mgs/kg/day is recommended. For severe disease with carditis with congestive heart failure, with or without arthritis, prednisone 40-60 mg/day may be used and increased if necessary. Intravenous steroids are recommended in fulminating cases.

After two to three weeks of steroid therapy, a slow withdrawal is recommended over several weeks with aspirin to be continued for one month thereafter. Strict bed rest for three weeks should be enforced for patients without carditis. For patients with mild carditis, bed rest should be continued for one month after carditis is detected. Patients with cardiac enlargement or failure should have longer periods of strict or modified bed rest (21).

TABLE 3

Antimicrobial Prophylaxis in ARF

1. To prevent intercurrent streptococcal infection
   A. Benzathine Penicillin G 1.2 million units I.M. every four weeks
   B. Penicillin V 125 or 250 mg p.o. B.I.D.
   C. Sulfadiazine or erythromycin orally
2. Prevent bacterial endocarditis in patients with residual valvular disease. (Use American Heart Association recommendations for prophylaxis - Reference 25)

Prevention

Rheumatic heart disease is the only long-term sequela of ARF. Prognosis in rheumatic patients has been shown to be improved greatly by preventing recurrent attacks of ARF and additional myocardial and valvular damage (20). Prevention of the first attack of ARF depends on the accurate diagnosis and appropriate therapy of Group A streptococcal infection (22,23). Although this primary prevention is effective, approximately one third of ARF cases unfortunately follow streptococcal infections which are asymptomatic or very mild.

Patients with a previous history of rheumatic fever require continuous prophylaxis to prevent recurrent streptococcal infections and additional cardiac damage (Table 3). The most effective regimen consists of a single injection of benzathine penicillin G, 1.2 million units, intramuscularly every four weeks. Sulfadiazine one gm/day for persons over 60 lbs. and 0.5 gm/day for those weighing less than 60 lbs. or penicillin V 125 or 250 mg, b.i.d., p.o. are also acceptable but are less effective than benzathine penicillin G, probably due to the difficulty of continuous compliance. Patients allergic to both penicillin and sulfa may be given erythromycin 250 mg, b.i.d.

The duration of the continuous antimicrobial prophylaxis remains controversial. The Committee on Rheumatic Fever of the American Heart Association (24) has stated that lifelong prophylaxis be considered for most patients even though the risk of streptococcal infection and ARF recurrence declines with age. Because of the apparent resurgence in ARF in the United States at present, continuous lifetime prophylaxis with penicillin should be considered for all patients with previous history of ARF or rheumatic heart disease, especially for those adults who have contact with children.

In addition to preventing the recurrence of ARF, patients with rheumatic valvular disease should receive antimicrobial prophylaxis directed at protecting them from bacteria endocarditis while they undergo dental and surgical procedures. These regimens are completely separate from those required for rheumatic fever prophylaxis and are outlined and periodically updated by the American Heart Association (25).

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Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

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A Primer For Physicians

Financing Long-Term Health Care In West Virginia

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Paying for long-term health care looms as a major concern for physicians but also for families and patients who accept this significant financial burden. Nonetheless, much confusion surrounds the issue of paying for long-term health care, especially nursing home care. We conducted a survey of physicians, residents and medical students; of nursing home employees; and of laymen to assess their knowledge and prevalent attitudes about this issue.

Most of the persons in each of the three groups know very little concerning financing of long-term health care. We review the avenues currently available for financing nursing home care which can assist physicians in their counseling of patients and families of patients who face this issue.

Introduction

Any physician who treats substantial numbers of elderly patients is confronted almost daily with the issue of financing long-term medical care for these individuals. While the singularly dramatic facet of this problem, long-term acute hospital care (i.e., "catastrophic insurance") has received widespread publicity and has been reasonably well addressed by lawmakers, the more common and potentially more costly problem is paying for long-term chronic care, in both institutional and home settings.

Considering that the average cost of nursing home care today approaches $22,000 per year, and that the average cost of similar care in a home setting costs one half of that amount, it is easy to calculate the speed with which the resources of most elderly persons are depleted by the demands of long-term health care. Two of three elderly persons now living alone would exhaust all of their resources within 13 weeks of entering a nursing home (1). The average stay in a nursing home currently is 2.4 years. Meeting these costs represents a significant problem for the elderly.

A hodgepodge of mechanisms exists for financing nursing home care, including Medicare, Medicaid, private pay, and the least known, long-term-care insurance. We conducted a survey to determine general knowledge concerning nursing home payment issues and to investigate attitudes surrounding long-term-care insurance.

Methods

We surveyed three groups: a group of 14 faculty, resident physicians, and medical students of the Marshall University School of Medicine and the Huntington Veterans Administration Medical Center; a group of eight nursing home employees (mostly patient-care aides) at Wayne Continuous Care Center; and 68 lay persons, 26 of whom are faculty members at Wayne High School and 42 of whom were canvassed in a door-to-door community survey.

The following questions were asked of all respondents: 1) age, marital

"Nearly two thirds of the nursing home aides and almost one half of the laymen and the physicians and medical students believed that their current hospitalization insurance would pay all or part of six months of nursing home care."

"Public misunderstanding seems to be greatest in regards to the definition of 'skilled care.'"

"Misinformation regarding costs of nursing home care is common among persons in all groups."

"No standard hospitalization insurance policy now sold by any company offers coverage for long-term nursing home care."

"Long-term care insurance represents one of the few viable options for persons of average income."

status, number of children, employment status, and veteran status; 2) "Do you have a relative or close acquaintance who is now or has recently been in a nursing home?"; 3) "How much do you think basic nursing home care, not counting drugs and special therapy, costs per day?"; 4) "If you had to enter a nursing home today and stay at least six months, how do you think it would be paid for—Medicare, Medicaid, private hospitalization insurance, private pay, VA benefits, or other?"; 5) "Have you ever heard of long-term-care insurance?"; and 6) "Do you think insurance to pay for nursing home care is a good idea . . . for yourself? . . . for the general public?"

Results

We found that age, sex, marital status, number of children and professional status of the respondents did not affect either the accuracy of general information or attitudes toward long-term-care insurance. Table 1 shows the characteristics of our three survey groups.

In the United States, approximately five per cent of persons over 65 years old are in nursing homes at any given time. A considerable number of people may be directly affected by the institutionalization of these persons. For example, 30.8 per cent of our respondents in the general public group had family members or close personal acquaintances who were in nursing homes, as did 28.5 per cent of the medical school personnel, and 50 per cent of the nursing home employees.

Misinformation regarding costs of nursing home care is common among persons in all groups. Estimates of costs by the general public ranged from $10 to $500/day with only 39 per cent of respondents making "reasonable" estimates of between $50 - $80/day. The medical school group guessed between $40 - $500, and one half of them made reasonable estimates. The nursing home employees generally more closely estimated the daily costs; 80 per cent of them were in the reasonable range.

The respondents' answers to questions on the source of pay if they themselves or a member of their family required nursing home care varied widely. For the most part they did not know realistically the source of nursing home payment. Only one person in all three groups believed Medicaid would in any way be involved in payment for their care (Table 2). Clearly in this current system, Medicaid supports much of the overall nursing home costs; this point is discussed in detail later. Each of the groups chose as the major payment source Medicare and hospital insurance (Table 2). Nearly two thirds of the nursing home aides and almost one half of the laymen and the physicians and medical students believed that their current hospitalization insurance would pay all or part of six months of nursing home care. In each of the three groups, 12 to 15 per cent assumed that Medicare would pay the costs in part or in whole.

When respondents were asked whether they had ever heard of long-term-care insurance, only 27.9 per cent of the general public had any awareness that such a category of insurance coverage existed. Slightly more health care professionals were aware of the coverage. Thirty-eight per cent of the nursing home employees and 42.8 per cent of the medical school group had heard of long-term-care insurance.

TABLE 1

Demographic Characteristics of Survey Respondents

Characteristic	*Group 1* Laymen (N=68)	*Group 2* Physicians, Residents and Medical Students (N=14)	*Group 3* Nursing Home Aides (N=8)
Average Age	40.1 yrs	29.5 yrs	33.7 yrs
Gender			
Male	26	8	0
Female	42	6	8
Currently Married (%)	75	71.4	50
Average Number of Children	1.72	0.78	1.62
Veterans (%)	14.7	7.0	0
Currently Employed (%)	72	50	100

Without providing further information on long-term-care insurance, such as average premium or benefit packages, we asked respondents whether "insurance for nursing home care was a good idea." Seventy-five per cent of the general public answered that it might be satisfactory for themselves, and 79.4 per cent thought it good coverage for others. Sixty-three per cent of the medical professionals and only 50 per cent of the nursing home employees considered "nursing home insurance" reasonable for themselves. However, 78.1 per cent and 78 per cent, respectively, indicated that the general public should have such coverage. There was no correlation between the respondents' estimate of costs of nursing home care and their opinion on the desirability of long-term-care insurance.

Discussion

The long-term care component of the American health care delivery system has been described as having "intractable problems in controlling costs, achieving an acceptable level of quality, and insuring equitable access" (2). A primary reason for the intractability of the problem has been widespread and persistent misunderstanding on the part of the public of the payment system as it now exists. In our small survey, one third to one half of those questioned were unable to identify correctly the major source of nursing home cost coverage. Most assumed that their current private "hospitalization insurance" would pay for six months of nursing home care, and another one tenth believed that Medicare alone would cover the cost. In 1985, private insurance paid for only a fraction of one per cent of the total of $35 billion spent in this country for nursing home care, and Medicare paid for less than two per cent.

Only one fifth of the total group survey participants felt they would be privately responsible for their nursing home bills. In 1985, over one half ($18 billion) of such bills were paid out-of-pocket by patients and their families. Although not one respondent in our survey imagined that he/she would become wholly dependent upon Medicaid, the statistics show that nearly 47 per cent of all nursing home care in the United States is paid by the various state-funded Medicaid programs.

TABLE 2

Respondents' Opinions of Payment Sources

Category Selected as Source of Payment*	*Group 1* Laymen No. (%)	*Group 2* Physicians, Residents and Medical Students No. (%)	*Group 3* Nursing Home Aides No. (%)
Medicare	9 (13.2)	2 (14.2)	0
Medicaid	0	0	0
Hospital Insurance	22.2 (32.3)	1 (7.1)	5 (62.5)
Private Pay	17 (25)	4 (28.5)	1 (12.5)
VA	0	0	1 (12.5)
Medicare/ Hospital Insurance	2 (2.9)	0	0
Medicare/ Private Pay	3 (4.4)	0	0
Medicare/ Insurance/ Private Pay	1 (1.4)	2 (14.2)	0
Hospital Insurance/ Private Pay	4 (5.8)	4 (28.5)	0
Unspecified "Other"	2 (2.9)	0	1 (12.5)

*Totals do not equal 100% because respondents could choose one or a combination of categories. Only combinations chosen by more than one person are tabulated.

TABLE 3

Examples of Long-Term Care Policies*

Company	Annual Premium at Age	Benefit Per Day for NH Care
Aetna	55:$168-550 65: $308-1240 75:$888-4,460	$40-100 for 4 consecutive years
Prudential/ AARP	55:$179 65:$479 75:$1,139	$40 for 3 years

*Data accurate for June 1987 and are representative of the type of plans available (1).

Medicaid

In West Virginia in 1985, $72 million was paid out to nursing homes to care for approximately 5,700 Medicaid patients (3). This calculates to $12,600 per patient, a relative bargain for the state compared to an average annual private pay rate in excess of $22,000 per patient. Until other viable options emerge to pay for nursing home care, this huge public expenditure can be expected to increase because the elderly population continues to grow, and the number of nursing home beds increases in parallel. A useful rule of thumb for physicians is that the addition of 100 nursing home beds increases the Medicaid budget by one million dollars (3).

It is important to realize that Medicaid pays only after private resources are totally exhausted. In order to qualify for Medicaid in West Virginia to cover nursing home charges for an individual, the applicant must "spend-down" his own resources to the point of having less than $1,700 in total assets or $2,550 when there are two in the household. Home ownership can be maintained only if there is a spouse or child living in the home. Any transfer of assets to another party must have taken place more than two years prior to the application for Medicaid in order to consider those assets as unavailable for the patient's use. Genuine impoverishment, then, is the sine qua non of Medicaid eligibility.

Medicare

The role of Medicare in paying for long-term care is greatly misunderstood both by laymen and health care professionals. Repeatedly in conducting our survey we heard comments such as, "Medicare will pay the nursing home if you're admitted from the hospital." However, Medicare coverage for nursing home care is extremely limited—it covers 1) **only** skilled nursing care; 2) only 20 days of care at 100 per cent; and, 3) a paltry 20 per cent of an additional 80 days of care. Public misunderstanding seems to be greatest in regards to the definition of "skilled care." In a practical sense this refers only to patients receiving

continuous IVs or who need treatment for large infected wounds. At intermediate-level nursing facilities, patients can and do receive procedures such as tube feedings, oxygen therapy, and other modalities which to the laymen appear quite skilled, but that do not qualify for payment as skilled nursing.

In West Virginia, approximately 40 per cent of nursing home beds are certified as skilled beds and 60 per cent are classified intermediate beds. This overestimates the use of skilled facilities, as many intermediate-designated patients occupy skilled beds. The ceilings called for in the State Health Plan will eventually yield only 13 per cent of the total number of nursing home beds for designation as skilled.

Private Insurance

No standard hospitalization insurance policy now sold by any company offers coverage for long-term nursing home care. This includes policies promoted primarily to the elderly as so-called "Medigap" policies, purported to "pay what Medicare doesn't." This has been a source of great distress to many older people who have been induced to buy one or more such policies, believing their worries would be over with regards to *all* medical care.

Only specifically written policies for long-term care insurance cover long-term care. Several policies have been marketed, the first of which were promoted in Sunbelt retirement communities with the co-sponsorship of the American Association of Retired Persons. The response has been a significant disappointment to the insurance industry as the AARP-sponsored policy has been sold to fewer than five per cent of potential customers.

A number of companies (70 or more) now offer long-term care insurance policies, with widely variable premiums and benefits. About 200,000 policies are in force nationwide (1). Examples of policies offered by two companies operating in West Virginia are shown in Table 3.

VA Benefits

The Veterans Administration is the source of limited long-term care benefits for eligible veterans. Two of West Virginia's four VA medical centers have Nursing Home Care Units which provide unlimited nursing-home-level care. The Martinsburg VAMC has a 120-bed unit and the Beckley VAMC has a 42-bed unit. Private nursing homes may arrange to accept patients on contract from the Veterans Administration, which will pay for their care six months, but only if the patient is admitted to the nursing home from a VAMC. "Unlimited contract," that is, lifelong payment for nursing home care, is available for persons who have 100 per cent service-connected disability, or who require nursing home care for a specific disability for which they have been designated as service connected.

"As physicians we need to keep abreast of the new developments in order to dispel misinformation and correctly counsel our patients with chronic illness, as many will ultimately come to us with such concerns."

The Future

Virtually every health care planning group recognizes the significant problems involved in coping with nursing home costs. Usually these groups begin by recommending a decrease in utilization of institutional care. Though this is a laudable and in some cases an achievable goal, there will remain an irreducible minimum number of persons who nonetheless will require long-term institutional care. As the population of the United States ages, it is likely that the absolute numbers of such persons will increase, even as the ratio of institutional-to-home-care decreases because of concerted efforts of the health care planning groups, physicians, and families.

State and federal governments cannot continue to absorb the increasing costs of long-term care. Currently, in West Virginia, 42 per cent of the Medicaid budget is being consumed by nursing home charges (3). It is unlikely that the percentage of Medicaid money used for nursing home care can be increased considering the growing demand for medical services from all segments of the population in our economically disadvantaged state.

Recently Medicare added highly acclaimed "catastrophic" coverage, but this will pay only for hospital care and *not* all additional charges incurred as many Medicare recipients believe. Rep. Claude Pepper, the House of Representatives' octogenarian advocate of the elderly, has called for and sponsored legislation providing for Medicare expansion to cover the costs of nursing home care. Given the current climate of stricter federal budget control, this legislation will not likely pass the Congress this session. The Secretary of Health and Human Services, Dr. Otis Bowen, has suggested the establishment of tax incentives to encourage "Individual Medical Accounts" (IMAs), personal bank accounts set aside for payment of medical expenses in later life (4). This is an attractive proposal only for those persons whose income sufficiently exceeds their current living expenses to permit them to set aside money for an IMA. Most elderly persons cannot now or will not likely be able to do so.

Life-care communities are being established in many areas. These are residential centers with either independent or congregate housing facilities designed to provide "a continuum of health and social services for a geriatric population." However, entrance fees are prohibitively high, especially so for elderly persons of average income. The entrance fees range from $30,000 to $150,000, and additional maintenance fees may range from $600 to $1,200 per month.

Long-term-care insurance represents one of the few viable options for persons of average income. At present in West Virginia, continuum of care legislation provides that all insurance companies engaged in business in this state must offer policies for long-term

care (5). However, specific regulations regarding required minimum benefit packages and premium structures do not yet exist, so that purchasers of such policies must be extremely cautious in choosing coverage. Nevertheless, many experts recommend serious considerations of the purchase of long-term-care insurance by all employed persons in their 50s and early 60s. The federal government supports this recommendation by proposing the addition of a long-term-care option to the existing Federal Employees Group Life Insurance Program (6).

Summary

Our survey has identified some of the important gaps in both public and professional knowledge of the issue of paying for long-term care, and we have discussed some possible solutions to the problem. False assumptions, fed by confusing, if not outrightly deceptive, advertising, continue to hamper the acceptable resolution of the problem of paying for long-term-care. Several proposals, including IMAs, life-care communities, and long-term-care insurance are all relatively attractive for different groups of consumers. However, all of the programs are limited in that they must be planned for long before most people imagine they will ever have such a need, and a significant amount of "disposable income" is needed for their implementation.

For the already poor and those who are quickly impoverished by nursing home care, the "mercy of the state" must still be depended upon. Perhaps adequate planning and use of options such as long-term-care insurance by groups who can currently afford it will ultimately free up scarce public resources to be used by the truly needy.

As physicians we need to keep abreast of the new developments in order to dispel misinformation and correctly counsel our patients with chronic illness, as many will ultimately come to us with such concerns. Collectively we also need to be advocates for our patients, supporting legislative attempts to untangle this web of financing long-term care.

Acknowledgement

The authors thank Hanley Clark, Deputy Insurance Commissioner for the State of West Virginia for technical information; Dr. Maurice A. Mufson for very valuable manuscript review; and Mrs. Frances Mooney and Mrs. Carolyn Endicott for secretarial assistance.

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President's Page

"Planning ahead will surely give us the head start we definitely need."

Political Activism

Another regular Legislative session is over, but the same story can be told as far as the West Virginia State Medical Association is concerned. It is exactly how one would describe what happened to our Legislative efforts for 1988.

Despite vigorous and tenacious activity of a full-time lobbyist, two part-time lobbyists, our AMA Delegates, various Councilors, and additional efforts by our Executive Director at the State House, we seem almost invariably to come out as we did in previous years, on the short end of the stick. Nevertheless, this legislative activity must continue in the future and even be intensified. This degree of activism, however, must be augmented peripherally by our membership at grass-root levels. Our component societies must encourage and provide this additional activism. To demonstrate this activism it implicitly is necessary that we be political. The very nature of external forces affecting Medicine demands our involvement in the political trenches. These forces are attempting to, and are, dictating our destiny in practically every aspect of the practice of medicine, and they must be confronted.

Through organization and planning, the strategy of this activism should be carefully mapped out now! Blueprints for our programs on political activity should be planned far in advance. We always seem to be slow getting off the starting block. Planning ahead will surely give us the head start we definitely need. Component societies can and must help try to get our message to the legislators and their constituents in advance and continuously throughout the Legislative session. Our leadership must continue to look for innovative ways to ascertain our mission and the interests of our membership. Physicians must cease to be apolitical.

Quoting AMA President Elect, James E. Davis, M.D., of North Carolina in 1985 to the College of American Pathologists, "The medical profession cannot stand above the political trenches anymore than a drowning man can ignore the water." Let's tell a different story come next year.

—Cordell A. De La Pena, M.D.

Hierarchy Of Risk In Coronary Artery Disease

For several decades, Type A behavior has been studied as a risk factor for coronary heart disease. Most physicians have believed there is a positive correlation, although the original studies indicating such have been challenged.

The January 14th issue of *The New England Journal of Medicine* contains an article entitled "Type A Behavior and Mortality From Coronary Artery Disease" by Doctors Ragland and Brand. The authors report that the assumption of increased risk (positive risk factor) in these persons is invalid, and that the risk actually is decreased (negative risk factor).

The larger picture of levels of risk in coronary artery disease is of great interest as this condition and its consequences are still, by far, the leading causes of death in the United States.

Family history remains the factor of greatest importance. It is also the one over which the individual has no control. Freedom of choice of ancestors would provide an important option for insuring longer and healthier lives.

A second level of risk includes hyperlipidemia, with or without diabetes, hypertension, and cigaret smoking. The relative importance of all these remains a subject of debate. Consensus is that they have great, but fairly equal, significance. These are conditions over which the individual, with professional help, may exercise some control.

At the next level are many partially proved or highly suspect factors: obesity, poor dietary habits and physical condition, sedentary versus active lifestyle, stress, and others. Ragland and Brand report that Type A personality is not only not a positive risk factor in mortality due to coronary events, but may have a salutary effect. This would be good news, if confirmed, for the majority of us (50 to 70 per cent of the population). These traits include "a relatively high level of ambitiousness, aggressiveness, hostility, and competitive drive and a chronic sense of urgency." Type B behavior implies the relative absence of these characteristics.

The private practices of medicine in 1988 can only accentuate these character traits for physicians. It is comforting to speculate that current constraints which have made practice "no fun any more" could have some positive effect on our future health and well being.—JMH

Cost Containment: Force For Good Or Havoc Wreaker?

It is no secret that government, the public and a host of other forces are constantly at work against medicine's objective of offering quality medical care at a fair price.

How to obtain more for less is a basic principle of the free enterprise system, and this is understood by most business people, physicians and the public which purchases goods and services.

Consideration of cost alone, however, often clashes with reality as the physician must deal with it on the patient's behalf. Repeat studies and polls suggest that the public wants quality care, and that the cost of the care is secondary to that quality.

A Lou Harris poll done recently for the Harvard Community Health Plan, Boston, found that Americans believe health insurance plans shouldn't place financial limits on medical treatment that would save lives, even if it cost $1 million to save a life. And nine of 10 people surveyed believe everyone is entitled to health care "as good as a millionaire could get."

So what is the professional to do? More and more stories are surfacing about elderly patients discharged "sicker and quicker" than good medical judgment would dictate just to satisfy the cost constraints of the DRG system. Physicians feel their medical judgment is being sacrificed to the goddess of cost containment while peer review organizations seek to do the bidding of the goddess, HCFA. And HCFA serves the goddess, Congress, which apparently answers to no one, least of all the taxpayers who foot the bill.

HMOs and PPOs are falling by the wayside despite being hailed as the means of delivering cost-efficient medical care. The fact is that health care is a labor-intensive business whether that labor be in the person of the doctor, the nurse, the lab technician, the hospital custodian, the groundskeeper or the engineer who designs the wonderful, life-saving machinery that keeps people alive in the intensive care unit.

Critics rail against the high cost of medicine and medical technology and argue that the "fat" must be carved out of the system. In truth, the bulk of that fat has been wrung out. Hospitals, physician offices and other providers of care are existing on bare bones operations devoid of luxuries and even paring back on some highly desirable, if not necessary, services.

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Unfortunately, because health care is so labor-intensive, it cannot accomplish many of the cost-cutting efficiencies evident in other kinds of businesses. One cannot mass-produce cardiac surgery or even simple appendectomies on a production line to save money as one can do in building cars or widgets.

Hospitals and physicians are subject to the same cost increases which all other segments of the economy face—higher labor costs, more expensive benefits, higher taxes, rents and utilities. The big difference is that while the merchant who accepts food stamps still charges the recipient a dollar for the loaf of bread and is not expected by government to sell the bread at a loss, physicians and hospitals find their services routinely discounted 20, 30, 50 or even 80 per cent by government and other third-party payors.

Not only does the State of West Virginia discount the services it purchases from health care providers, it now takes months to pay for the services. And in the case of Medicaid, the price eventually paid for the service rendered does not even cover the cost of delivering the service in most cases. How long do you suppose the grocer would continue to honor food stamps if he was forced to lose $.25 or $.50 on every loaf of bread or gallon of milk?

Yet physicians are made out to be the bad guys when they choose to limit the number of Medicaid patients they will see. There is no question in the minds of many physicians that they are, under the Hippocratic Oath, obligated to do their duty to their fellow man and care for the frailties and hurts, but where does that obligation end? And where does his personal obligation to himself and his family enter?

All physicians worth their salt offer charity care freely and without expectation of reimbursement or personal gain. But it is not the fault of physicains that government created and promised to deliver care to the elderly and the poor and is now reneging on the promise because the system has become too costly to afford.

Physician fees account for only 20 per cent of the health care dollars spent. While it is true that it takes a physician to order the variety of tests and procedures done to diagnose and treat a patient, it is not true that physicians command the lion's share of the health care dollars spent.

As the patient's purchasing agent, the physician has an obligation, both ethically and morally, to obtain the best care for his patient with an eye to cost effective treatment. But it is becoming increasingly difficult for him to function in that role given the constraints placed upon him by outside forces, be they government, third parties or professional second-guessers.—MGS

Our Readers Speak

Drug Cause Of Thrombocytopenia?

I was recently involved in an interesting case of thrombocytopenia. An 87-year-old white male presented to the emergency room with a right lower lobe pneumonia. He was found to have Haemophilus influenzae infection with marked thrombocytopenia of only 48,000 platelet count.

He was taking Theodur chronically at home before he became ill. As he was continued on this medication his white blood count progressively became lower, decreasing from 7.8 on admission down to a low of 2.5 on the third hospital day. At that time his platelet count had risen slightly to 90,000. The differential was 60 segs, 32 lymphocytes, six monocytes and two eosinophils. This was two days after the Theodur was discontinued. I had felt that possibly the Theodur was the cause in this case. It did seem like he responded well to discontinuing Theodur. On discharge on the 18th, his white count was 6.3 with a hemogoblin of 12.0, and platelet count was 193,000 with a differential of 90 segs, two bands and eight lymphocytes. The bone marrow report showed a hypoplastic bone marrow with poor iron stores.

I feel this case represents a bone marrow suppression due to Theodur. This is not listed as a possible cause of thrombocytopenia in *Cecil's Textbook of Medicine.* It is difficult to determine whether the infection had anything to do with this also. Theodur is a commonly used drug and, due to the timing of his response to discontinuance, I feel it was a main culprit in causing the thrombocytopenia.

W. Douglas Given, M.D.

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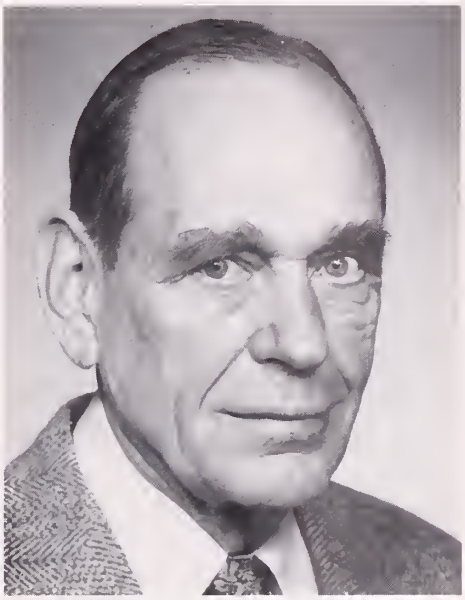
James L. Griffith, J.D.



Eugene A. Stead, Jr., M.D.

Medical Liability, Ethics Talks By Attorney, Doctor

Medical liability as seen by a defense attorney, and a physician's view of ethics are planned for the Friday morning, August 19, scientific session of WVSMA's convention.

The 121st Annual Meeting will be held August 16-21 at the Greenbrier in White Sulphur Springs.

"A Defense Attorney's Perspective on Medical Liability" will be the title of the opening talk by James L. Griffith, J.D., Philadelphia attorney whose firm has represented a number of medical groups.

Dr. Eugene A. Stead, Jr., of Durham, North Carolina, who was a speaker for the 1987 Mid-Winter Clinical Conference in Charleston, will discuss "Sensible Practice of Medicine in a Technologically Oriented Society—Some Call This Ethics."

Marketing medical practice will be the concluding Friday morning topic.

The first general scientific session, to include papers on AIDS and controversial surgical procedures, will be held Thursday morning.

Cardiovascular surgery and endoscopic therapy of biliary and pancreatic disease will be the topics for the third and final scientific session Saturday morning.

Medical Liability Lectures

Griffith has lectured before a number of medical groups, beginning as early as 1974, on medical liability loss control and related subjects. A partner in the firm of Griffith & Burr, P.C., in Philadelphia, professional medical societies represented by his firm include the Philadelphia, Pennsylvania and Eastern orthopaedic associations, Pennsylvania Psychiatric Society, Pennsylvania Neurosurgical Society, and Pennsylvania Branch of National Associations of Private Psychiatric Hospitals.

Earning his LL.B. degree in 1965 from Villanova University School of Law, Griffith is a member of a number of professional societies including the American Bar Association Committee on Antitrust Litigation and Professional Liability. In 1987, he was speaker for some 15 medical groups on various aspects of medical liability.

His articles have appeared in medical publications including *Medical Economics* and *Ophthalmic Surgery*. He is a past lecturer at law at Villanova, and served for six years as an administrative officer in the U. S. Army Medical Services Corps.

Professor of Medicine

Doctor Stead was Florence McAlister Professor of Medicine and Chairman, Department of Medicine at Duke from 1947-1967, and now is Professor Emeritus in that appointment. He also was Physician-In-Chief at Duke Hospital during those years.

Doctor Stead is Editor of the *North Carolina Medical Journal* and past Editor of *Medical Times* and *Circulation*. He is past Secretary and President of both the American Society for Clinical Investigation and the Association of American Physicians, and also is past Chairman of the Ethics Committee of the American Heart Association.

Born in Atlanta, Doctor Stead has received a number of awards and honorary degrees from professional groups and educational institutions.

He received both his undergraduate and M. D. (1932) degrees from Emory University, and took his internship and other postgraduate work at Peter Bent Brigham Hospital, Harvard and the University of Cincinnati.

It was announced previously that Dr. Jeffery C. Hutzler of Cleveland will speak on "The Psychosocial Management of the AIDS Patient and Family" during the first general session Thursday morning. Doctor Hutzler is Program Director of the Outpatient Clinic at the Cleveland Foundation.

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It also was announced that Dr. James E. Davis of Durham, North Carolina, who will be installed as President of the AMA in June, will address the second session of the WVSMA House of Delegates Saturday afternoon.

Convention Schedule

Convention activities will begin with a meeting of the Executive Committee Tuesday afternoon, August 16. Council will meet Wednesday morning, Thursday afternoon will be set aside for recreation and golf and tennis tournaments, and meetings of WVSMA sections and specialty societies will be held Friday afternoon.

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

Additional convention speakers, topics and plans will appear in upcoming issues of *The Journal.*

AMA Offers New Member Packages

To enhance the value of AMA membership, the American Medical Association will offer members an opportunity to select one of three new benefit packages in 1988. Members will have the opportunity to select *one* and *only one* of these three new packages when they receive their 1988 Membership Kit.

Members should have received the 1988 AMA Membership Kit, which includes a membership certificate suitable for framing, a wallet-sized membership card, and a flyer describing the complete array of products and services to which members are entitled. In addition, the 1988 Kit includes a postage-paid business reply card which members should use to select *one* and *only one* of three new benefit packages of comparable worth and return the card to the AMA. Members who return their completed card to the AMA will receive their special benefit package as it becomes available.

The new benefit packages are the first of a series of steps in a major new AMA program which addresses the differing membership needs of the various segments of the medical profession. This program, which will become fully operational by the end of 1988, was developed with the MAC Group, a Cambridge, Massachusetts-based consulting firm specializing in marketing strategy. The program classifies members into one of three market segments. One segment primarily seeks broad representation from the AMA. A second segment looks to the AMA first and foremost for economic representation. A third segment has a principal interest in receiving medical education and information from the Association.

The new benefit packages, which members will be given an opportunity to choose via their 1988 Membership Kit, will allow AMA members to choose from three "product lines" which correspond to the three major benefit types for the first time. As a result, members will have the opportunity to self-select a tailored membership benefit package which corresponds to the market segment which most closely meets their needs.

According to James H. Sammons, M.D., AMA Executive Vice President "There have always been very compelling reasons for physicians and medical students to support the AMA through membership. The three new tailored benefits packages constitute yet another good reason to join. They are first steps in a continuing AMA effort to be even more aware of what members want and, more importantly, to give it to them."

"I'm putting you on a very simple diet . . . if it isn't green and crunchy don't eat it."

State Eye Doctors Meet April 24-27

Surgeons representing the University of Louisville, Dallas Ophthalmology Center and the American Academy of Ophthalmology are among the featured speakers for the West Virginia Academy of Ophthalmology's 41st annual national spring meeting. The meeting will be held at the Greenbrier in White Sulphur Springs April 24-27.

Marshall M. Parks, M.D., of Washington, DC, will discuss pediatric ophthalmology and strabismus. A former Chairman of the American Board of Ophthalmology, Doctor Parks has served as an Instructor with the Georgetown University Medical Center and as Clinical Professor with George Washington University Medical Center.

A pioneer in intraocular lens implants (IOLs), William Sands Harris, M.D., of Dallas will discuss cataracts, IOLs and complications.

Thom J. Zimmerman, M.D., Ph.D., Professor and Chairman of the Department of Ophthalmology, University of Louisville, will speak on medical and surgical management and complications of glaucoma.

Oculoplastic and reconstructive surgery will be addressed by Richard L. Anderson, M.D., Professor of Ophthalmology, University of Utah.

Drs. Hunter R. Stokes of Florence, South Carolina, and William N. Offutt IV, of Lexington, Kentucky, representing the American Academy of Ophthalmology, will talk on federal and state legislation affecting ophthalmology and state society issues, respectively.

The annual meeting carries 16 hours ophthalmology credit and AMA credit, Category I.

For further information and registration details, contact Samuel A. Strickland, M.D., Secretary-Treasurer, PO Box 3107, Charleston, WV 25331, or telephone (304) 345-4136.

Poetry Corner

Resurrection

Death thou obscene creature, thou destroyer of beauty
Thy raw, tasteless, horrid visage intrudes on my conciousness and demands a reckoning.
Thou knowest well that I am the Lord's
That his call is sure to cancel your moment of triumph
And I shall arise from the dust and sit by his side.

Did you think you could thwart my Lord?
Even he who proved his mastery by raising Lazarus
And he—— two short days and rising on the third
Thinkest thou that I, who art his
Will cringe from your faceless presence?

O Death where is thy sting? Thou who would make of me
A coward refusing to talk or even think of such
For fear of attracting your attention.

Nay I fear not
Nor seek to halt the flow of days
That speeds me on the way to an ever-nearing end
That really is a beginning.

J. Paul Aliff, M.D.
Teays (Putnam County)

Idyll*sm Falls By Real*ty

Cling to clouds, yet fear not to fly;
walk low, with careful footfalls.
Gaze high to look, yet low to see,
risking atoms on your Is.
Through new-glass's lies more-kindly views,
with mounting clarity.

Look not with-out one's new-found Is,
but peel within to see.
That tears' -rain and trees' -blood come
so near'st the top, as star-light skies
and twist-peeling plan'ts collide.
'Tis far-nobl'r to find chasms on worn pavements,
than to image sky-paintings a-top tall timbers?

Francis H. Oliver, M.D.
Morgantown

We request physician contributions to Poetry Corner.

Live Angioplasty Cases In Course

A presentation of live case demonstrations will be used for an angioplasty course to be held May 5-6 in the auditorium of the West Virginia University Medical Center, Charleston Division.

Closed-circuit production will allow two-way communication between the Charleston Area Medical Center (CAMC) cardiac catheterization lab and the WVU auditorium. The course moderator will discuss and address questions from the floor or direct them to the catheterization lab.

This two-way interactive course is sponsored by the Heart Institute of West Virginia at CAMC and WVU Medical Center, Charleston Division. Dr. Harold Selinger, Medical Director of the Institute, is the Program Chairman.

Featured speakers will be Drs. Kenneth M. Kent, Director, Cardiac Catheterization Lab, Georgetown University Medical Center; and Richard K. Myler, Medical Director of San Francisco Heart Institute.

Local faculty will include Doctor Selinger and Drs. Ganpat G. Thakker, CAMC cardiology and Clinical Associate Professor of Medicine, WVU Charleston Division; Stafford G. Warren, CAMC cardiology and Clinical Professor of Medicine, WVU Charleston Division; and Jamal H. Khan, CAMC surgery and Clinical Professor of Surgery, WVU Charleston Division.

Special program emphasis will be on changing indications, results, newer technology, randomized trials and acute intervention.

For fee and other information, contact the CAMC Department of Continuing Education (304-348-9580).

Vaccine No-Fault Concept In Effect

Editor's Note: A landmark law, the "National Childhood Vaccine Injury Act," was approved in December, 1987. In January, 1988, a communication about the new law was sent to pediatricians by the President of the American Academy of Pediatrics. This is reprinted below for the benefit of Journal readers.

"On December 22, 1987, the President signed into law the funding mechanism for the "National Childhood Vaccine Injury Act." In short, this law promises a safe and secure vaccine market, a fair remedy for children who are inadvertently injured, and greater protection from liability for vaccine administrators and manufacturers. This represents a significant victory for you and the children of this nation and will lend stability to our childhood immunization program. A 'no-fault' concept with respect to immunizations is now the law of the land, with parents given a fair and reasonable alternative to litigation.

"Beginning October 1, 1988, all liability claims against a vaccine administrator or a manufacturer must go through the compensation system. The compensation program will award to the parents or guardian an annuity that will include coverage of the child's medical expenses, pain and suffering (up to $250,000) and projected loss of income for the lifetime of the child. Funding for the annuity would

come from a vaccine trust fund. A parent must reject this award in order to go to court.

"All injuries occurring before October 1, 1988, will be considered old claims and parents could be awarded payment for future medical expenses and up to $30,000 in related expenses. Funding for retroactive awards will come from general revenues.

"Given the current economic climate, funding for the vaccine trust fund will come from a surcharge on each vaccine dose levied against the manufacturer. We anticipate at least part of these costs will be passed on to the consumer, in the short term, but expect vaccine prices to begin to level off and be reduced in the long term. To keep this charge at a minimum, a cap of 150 awards was placed on the number of claims that could be paid on an annual basis. While we recognize that this number is more than double the number of permanent injuries that the Centers for Disease Control estimate will occur, Congress has allowed for a comfortable margin of error and solvency of the system.

"The amount of the surcharge is not set in concrete. The Secretary does have the authority to change this and will do so once we have some experience with the utilization of the system. In the interim, the Academy leadership is meeting with the vaccine manufacturers and the federal goverment to assure that cost does not jeopardize our immunization program.

"New recording and reporting requirements will be imposed with this new law. While you will be officially notified on these requirements by DHHS, we would advise you to begin to comply immediately. You will simply need to record the date, lot number and administrator of each vaccine dose in your office and will need to report to CDC any reaction listed on the package insert or on the table of compensable events included in the law. This table will be published in the next issue of AAP News.

"If you have any questions, please feel free to contact Jackie Noyes in our Washington office (800/336-5475) or me."

Sincerely,
Richard M. Narkewicz, M.D.
President
American Academy of Pediatrics

WVSMA President Cordell A. De La Pena, M.D., center, Clarksburg, holds the 1987 AMA Membership Award which was presented to the Association for exceeding its ninth consecutive prior year AMA membership during the AMA National Leadership Conference in January in Chicago. With him are Drs. William S. Hotchkiss, left, Chesapeake, Virginia, AMA President, and Alan R. Nelson, Salt Lake City, Utah, Chairman of the AMA Board of Trustees.

Office Managers Elect Officers

New officers, all from Charleston, have been elected for the Office Managers Association of Health Care Providers.

Dawn Dodd, Office Manager for Dr. William C Morgan, is President; Teresa Painter, Office Manager for Drs. Fred Kerns and Michael Keegan, Vice President; Kim Pauley, Office Manager for Charleston Renal Group, Secretary, and Diana Lyons, Office Manager for Dr. Steve McCormick, Treasurer.

The out-going President, Dian White, Office Manager for Dr. Eduardo Suson, is now Chairman of the Board.

The purpose of the Association is to improve management techniques and communications within and among medical offices. Membership is open to any office manager of a health care facility. Meetings are held bi-monthly at the West Virginia University Education Building in Charleston.

For more information, contact Dian White, Membership Chairman, at (304) 342-1129.

Commission Issues Call For Papers

A call for papers has been announced by the National Commission on Correctional Health Care for the 12th National Conference on Correctional Health Care, October 31—November 2, in Lake Buena Vista, Florida. The papers may be for presentations, panel discussions and workshops.

Proposals of no more than 200 typed words, describing the topic, objectives to be attained, and type or method of presentation should be submitted along with a resume to the Commission offices, 2000 N. Racine, Suite 3500, Chicago, Illinois 60614. Further information and complete proposal requirements are available by calling the Commission at (312) 528-0818.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine for part of 1988, as compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Robert E. Kristofco, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Kristofco, (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University

April 8, Hospital Ethics Committee in WV: A Symposium on Their Functions

April 9, Medical Examiners Conference

April 29, Internal Medicine Day

April 30-May 1, Clinical Workshops in Physical Therapy

May 6-7, Orthopedic Reunion Days

May 14, Symposium on Sleep Disorders

June 3-4, Anesthesia Update '88

CAMC/West Virginia University, Charleston Division

May 5-6, Angioplasty Demonstration Course

May 20, Sexuality in the Spinal Cord Patient

June 4, Interventional Radiology

CME Outreach Programs

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(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—April 28, Update Pulmonary Medicine, Dominic J. Gaziano, M.D.

May 26, ENT Update, Ronald L. Wilkinson, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—April 7, Initial Evaluation & Treatment of the Trauma Patient, Dan Stewart, M.D.

April 28, Preoperative Cardiac Assessment of General Surgery Patients, Ronald Hill, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.,—April 14, The Breast, Daniel S. Foster, M.D.

May 12, Color Flow Doppler, Ganpat G. Thakker, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—April 20, Degenerative Changes in the Joints, Greg Kujala, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—April 5, Neck Pain: Workup & Treatment, Philip J. Mayer, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—April 6, Use of Blood Components, Mary B. Taylor, M.D.

May 4, Pediatric Emergencies, Pediatric Emergency Team, Kanawha Valley Children's Hospital

Hurricane, • Putnam General Hospital, 9:15 A.M.—April 8, GI Disorders, William O. McMillian, Jr., M.D.

Logan, • General Hospital, 11:30 A.M.—April 22, Lithotripsy, Tom McCoy, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—April 12, Hand Injuries, Michael O. Fidler, M.D.

May 10, New Treatment of Cardiac Diseases, Harold Selinger, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—April 19, Medical Rehabilitation in the 80s, Kenneth Wright, M.D.

May 17, Emergency Room Orthopaedic Management (to be confirmed)

Martinsburg, ★ City Hospital—April (no program)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—April 7, Management of TIAs and Strokes, Jack E. Riggs, M.D.

Montgomery, • General Hospital, 12 P.M.—April 6, Pediatric Orthopaedic Emergencies (speaker tba)

May 4, Ultrasound (speaker tba)

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—April 14, The Use of Clot-Dissolving Enzymes After a Heart Attack, Abnash Jain, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—April 26, Pediatric Emergencies, James E. McJunkin, M.D.

May 24, New Medications for Acute MI, Harold Selinger, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.— April 8, Dermatology Update, Kimberly Skaff, M.D.

May 13, Ultrasound Update, Mary McJunkin, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—April 28, Oncology Update—Breast, Steven Jubelirer, M.D.

May 26, Current Advances & Treatment of the Acute MI and Unstable Angina, James Stanton, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—April 19, AIDS, Terrie Lee, R.N.

May 19, Rheumatology, Mark Phillips, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—April 5, Drugs for Acute MI, Harold Selinger, M.D.

May 3, A Neonatologist Talks About the Sick Newborn, Ellen G. Szego, M.D.

Uniontown, PA, ★ Uniontown Hospital—April 13, Cholesterol—Why the Sudden Interest, Margaret J. Albrink, M.D.

Waynesburg, PA, ★ Green County Memorial Hospital, 7 P.M.—April 12, Child Abuse, Donald Cox, M.D.

(Continued on Next Page)

(Continued from Page 145)

April 26, Ultrasound Update, Steven L. Diehl, M.D.

Welch, ☐ Welch Public Library, 12 P.M.—April 20, Management of Chronic Pain, Thomas R. Douglass, M.D.

May 18, Workup of Headaches (speaker tba)

Wheeling, ★ Ohio Valley Medical Center, 8 A.M.—April 13, Important Aspects of Exercise Training, Mark A. Borsch, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—April 27, Identifying the Depressed Patient in the Primary Care Setting, Veena Bhanot, M.D.

May 25, Management of Chronic Pain, J. K. Lilly, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—April 19, Current Concepts of Alzheimers, Glenn R. Goldfarb, M.D.

May 17, Early Diagnosis of Breast Cancer, William L. Higgins, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—April 7 (Easter Holiday)

May 5, Diverticulosis, William O. McMillan, Jr., M.D.

Adoption Workshop Scheduled April 30

"Adoption is a beautiful way to build a family" is the theme of a workshop to be presented by Appalachian Families For Adoption (AFFA) April 30. The meeting site is Central United Methodist Church, Bigley Avenue and Buchannon, Charleston, from 9 A.M to 4:00 P.M. AFFA membership includes dozens of Southern West Virginians who have already successfully adopted children.

The major purpose of the workshop is to provide information concerning the many sources of adoption services in West Virginia. Many people believe that it is almost impossible these days to find a child for adoption in a reasonable time, but that is just not so, said the AFFA. Hundreds of West Virginians, singles as well as married couples, adopt foreign or American children every year, AFFA added.

Registration fee is $35. Further information and registration forms are available by calling Judy Dyer (after 6:00 P.M.), 768-0301; or Pam Estep, 342-1276; or by writing to AFFA, P. O. Box 2775, Charleston, West Virginia 25330.

Journal Wins Journalism Award

The *West Virginia Medical Journal* has received a special award for outstanding design and editorial qualities in the 13th annual medical journalism competition conducted by Sandoz Pharmaceuticals.

WVSMA will be presented a check for $250 and a certificate.

The *Journal* was notified in a March 4 letter from Dr. Craig D. Burrell at Sandoz. Prizes were awarded to 30 medical, pharmaceutical and hospital publications in 20 states.

"Your publication indeed is special because of its excellence over a long period," Doctor Burrell said.

Also receiving special awards of $250 each were the Journal of the Medical Association of Georgia, Pennsylvania Medicine, Pima County Medical Society (Tucson, Arizona), San Francisco Medicine, Wisconsin Pharmacist, Riverside Health Group (Toledo, Ohio), and New York Medical College (Valhalla, New York).

The five recipients of first prizes of $500 each were Michigan Medicine, New Jersey Medicine, California Pharmacist, the magazine of the Palm Beach County Medical Society in Florida, and the publications of the Jewish Hospital, Louisville, Kentucky.

Medical Meetings

April

15-17—WV Chapter, AAFP, Huntington.
16-21—College of Am. Pathologists, Kansas City Mo.
19-24—Am. Assoc., Orthopaedic Medicine, Dallas.
20—CNA Second Generation Loss Control Seminar, Martinsburg.
21-23—WV Chapter, Am. Academy of Pediatrics, Morgantown.
24-27—WV Academy of Ophthalmology, 41st Annual National Spring Meeting, White Sulphur Springs.
30—Am. Diabetes Assoc., WV Affiliate, Inc., Wheeling.

May

1-5—Am. Assoc. of Pathologists. Las Vegas.
1-5—Am. College of Obstetricians & Gynecologists, Boston.
2—Am. Pediatric Society, Washington, D.C.
4-7—WV Chapter, Am. College of Surgeons, White Sulphur Springs.
11—CNA Second Generation Loss Control Seminar, Parkersburg.
27-30—WV Academy of Otolaryngology, Head & Neck Surgery, White Sulphur Springs.

June

3-7—Am. Urological Assoc., Boston.
22—CNA Second Generation Loss Control Seminar, Huntington.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

21—CNA Second Generation Loss Control Seminar, Wheeling.
23-30—Am. College of Radiology, Cincinnati.
25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.

October

3-6—AAFP, New Orleans.
8-12—Am. Academy of Ophthalmology, Las Vegas.
12—CNA Second Generation Loss Control Seminar, Beckley.
13-16—Am. Society of Internal Medicine, Atlanta.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

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WVU Medical Center News

West Virginia University

Compiled from material furnished by the Medical Center News Service, Morgantown, W. Va.

Eye Care Project Helping Elderly

Ophthalmologists at WVU Medical Center are volunteering their services to an ongoing program designed to bring medical eye care information to the nation's disadvantaged elderly through a toll-free phone number, 1-800-222-EYES.

Callers nationwide who use this service are referred to an eye physician or surgeon in their area who has volunteered to provide needed medical care through the National Eye Care Project.

The program is sponsored by the Foundation of the American Academy of Ophthalmology and state ophthalmology societies.

According to B. Thomas Hutchinson, Chairman of the National Eye Care Project, older Americans suffer more than half the blinding diseases diagnosed in the United States each year.

1,843 Calls Received

Gov. Arch Moore signed a proclamation naming a National Eye Care Week to launch the program in West Virginia in January of 1986. Since then, approximately 1,843 calls have been received. All of the ophthalmologists at WVU and many in Morgantown and in other parts of the state are participating in the program.

To be eligible for the services, a caller must be an American citizen 65 or older, and must no longer have access to an ophthalmologist.

Volunteer ophthalmologists are accepting Medicare and/or other health insurance assignment as payment in full for their services. If the patient lacks insurance coverage, medical eye care is provided without charge.

Hospital charges, prescription drugs and eyeglasses are not covered by the program.

The National Eye Care Project helpline is open weekdays from 8 A.M. to 5 P.M.

Drugs For Athletes Tried Since 300 B.C.

During the 1960 Rome Olympics, Danish cyclist Kurt Enemar Jensen died of an overdose of amphetamines. Two of Jensen's teammates were hospitalized with amphetamine overdoses but survived.

Using substances in an effort to enhance athletic performance is a centuries-old practice, but it was Jensen's death in 1960 that brought this problem to the attention of the sports world.

"Performance-enhancing substances have a long and varied history," Ronald Cleavenger, Assistant Professor of Family Practice, said. "The practice has been traced back to the third century B.C. when Greek athletes tried to enhance athletic performance by ingesting large quantities of mushrooms.

"By the end of the 19th century, caffeine, nitroglycerin, ethyl ether and opium were widely used by European athletes. But it wasn't until 1968 that the International Olympic Committee (IOC) released a list of banned substances and began formal drug-testing. The practice is still in effect today including the 1988 Winter Olympics in Calgary.

"While most of the substances in use have the potential to enhance performance, they also have potential—and possibly very dangerous—side effects," Doctor Cleavenger said.

Anabolic steroids, used by athletes to build tissue, generated most of the controversy among the many available performance-enhancing substances.

Studies Difficult

"It's very difficult to do studies on any of these substances, particularly anabolic steroids," Doctor Cleavenger said. "The few projects that have been completed have examined doses that athletes say they are using. In reality, those who use the substance often take much larger doses."

Side-effects of using anabolic steroids appear to be different in males than in females.

In males, steroids can cause increased aggression, muscle spasms, development of liver tumors, increased or decreased sexual drive, excessive development of breast tissue, decreased sperm count and stunting of growth in teenage boys.

In females, increased facial and body hair, deepening of voice and increasing size of the clitoris have been noted.

Doctor Cleavenger said the side effects in males appear reversible, but the side-effects noted in females appear to be non-reversible.

"Perhaps the greatest problem with anabolic steroids is not the drug but who is using it. Most users are in a high risk-taking group, between ages 18 and 30. Unfortunately, they tend to take life for granted and see themselves as immortal."

Other Drugs, Methods

Other performance-enhancing drugs and methods in use today, according to Doctor Cleavenger, include beta blockers, blood doping, breathing oxygen from an artificial source, and stimulants such as cocaine, amphetamines, and caffeine.

A substance that has potential widespread abuse in the future is the "growth hormone," he warned.

"This is actually a normal body hormone secreted by the pituitary gland, but is being used as a substitute for the easily detected anabolic steroid."

Early studies of growth hormone use on laboratory animals have shown an increase in the size of muscle tissue, but not an increase in strength.

"There is no evidence that the growth hormone increases athletic performance, yet many young athletes may be using it in lieu of steroids," Doctor Cleavenger added.

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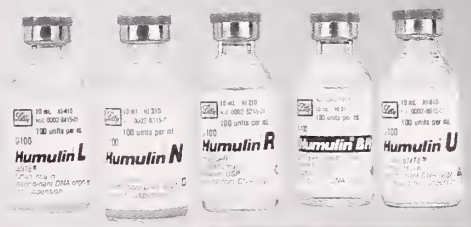

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MU School Of Medicine News

MARSHALL UNIVERSITY

$1 Million Grant Received

The School of Medicine has received a $1 million grant from the Huntington Foundation to establish an outpatient geriatrics center.

The center will be named in honor of the late Frank E. Hanshaw, Sr., according to Dean Lester R. Bryant, M.D.

Hanshaw, who had close ties with MU for many years, also was a trustee of the Huntington Foundation, Doctor Bryant said.

The gift to establish the outpatient geriatrics assessment center will be made in six annual installments.

"This critical seed money will have enormous long-term effects in this community," Doctor Bryant said. "Without the generous support of the Huntington Foundation, it would be completely impossible for the School of Medicine to develop this basic and much-needed program."

Quality Elderly Care

"We expect this geriatrics center to become very important to the health and quality of life for our region's residents," he said. "In addition, those improvements will spread to thousands of other elderly patients throughout the state since it will allow us to develop a strong educational program which will give medical students and graduate physicians the background and skills they will need to provide quality care for the elderly."

In addition, he said, information gained through the geriatrics center will help the school to explore better ways to care for the elderly and to provide continuing education events which will help practicing physicians keep pace with technical advances in this care.

The center will be located at Huntington Hospital, and will operate under the direction of the two geriatrists on the School of Medicine staff, Drs. Shirley M. Neitch and Joye A. Martin, in conjunction with Dr. Danny Wedding, Chief of the Division of Clinical Psychology. School officials hope to begin seeing patients at the center in May, once renovations are completed.

The program will stress a multidisciplinary team approach to preventing health problems in the elderly as well as assessing and treating existing health problems.

Eventually, he said, the center hopes to develop a "wellness" program with such features as exercise programs, nutrition classes and screening programs.

The school will begin immediately recruiting a geriatric nurse practitioner to work with Doctors Neitch, Martin and Wedding.

Frank E. Hanshaw, Sr., one of the founders and a past President of the Marshall University Foundation, died last May at the age of 79. He was Chairman of the board of Huntington Wholesale Furniture Company and had served as president of several local and national organizations including the Marshall Alumni Association, the Huntington Chamber of Commerce, the Tri-State Area Council of Boy Scouts of America, the Huntington Rotary Club, and the National Wholesale Furniture Association. He also was Chairman of the Administrative Board of Johnson Memorial United Methodist Church where he served as a trustee.

He was one of the original trustees of the Huntington Foundation, which was created in 1984 to return to the community money generated by the sale of Huntington Hospital to the Hospital Corporation of America.

In addition to the gift for the geriatrics center, the Huntington Foundation also has given MU research grants and the endowed Edith Miller Nursing Scholarship.

Graduation Events, Speakers Named

Graduation-related events at MU School of Medicine will feature Dr. John A. Gronvall, Chief Medical Director of the Department of Medicine and Surgery of the Veterans Administration in Washington, DC, and Dr. Robert Petersdorf, President of the American Association of Medical Colleges, also in Washington.

Doctor Gronvall will present the ceremonial Last Lecture to graduating seniors at 8 P.M. Thursday, May 12, at the Huntington Museum of Art.

Doctor Petersdorf will speak at the Investiture Ceremony Friday, May 13, at 8 P.M. in the Huntington Civic Center.

Before assuming his present post in January 1987, Doctor Gronvall served as Deputy Chief Medical Director and as Deputy Chief Medical Director for Academic Affairs. He previously was Associate Dean at the University of Mississippi School of Medicine and Dean of the University of Michigan Medical School.

California Dean

Doctor Petersdorf became President of the AAMC in September, 1986, coming to that post from the University of California, San Diego, where he was Vice Chancellor for Health Sciences and Dean of the School of Medicine. He served on the faculty of the University of Washington School of Medicine from 1960 to 1979.

A graduate of Yale University, he has held leadership positions in numerous professional organizations including Chairman of the Board of Governors of the American Board of Internal Med-icine; Fellow, Regent and President of the American College of Physicians, and President of the Association of Professors of Medicine.

Compiled from material furnished by the Office of University Relations, Marshall University.

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County Societies

McDOWELL

The McDowell County Medical Society met February 10 in Welch at the Bonanza Restaurant.

A presentation entitled "Update on Infectious Diseases" was sponsored by Glaxo Laboratories.

The Society approved the establishment of a speakers bureau and a quarterly educational program open to the public.—James Wilson, M.D., Secretary.

MINGO

The Mingo County Medical Society met February 10 at the Western Sizzlin Steak House in Goody, Kentucky.

The guest speaker was Dr. Warren Point, Professor and Chairman of the Department of Medicine, Charleston Area Medical Center. His topic was "Managed Health Care."

This was the pilot program for combining the meeting of the Society with continuing medical education.—Diane E. Shafer, M.D., Secretary-Treasurer.

MONONGALIA

Governor Arch A. Moore was the speaker for the meeting of the Monongalia County Medical Society February 2.

He spoke on three major topics: tort reform, the state of the PEIB, and medical education in West Virginia.—Robert L. Murphy, Executive Secretary.

PARKERSBURG ACADEMY

The Academy of Medicine of Parkersburg met January 13 at the Parkersburg Country Club.

The guest speaker was Dr. Steven Leichter, whose topic was "Management of the Difficult Diabetic Patient."

The Academy approved a donation of $500 to the Boys Club of Parkersburg and a donation of $500 to sponsor one hour at the Easter Seal Telethon.—Humberto Escandon, M.D., Secretary-Treasurer.

WESTERN

The Western Medical Society met February 9 in Ripley at Jackson General Hospital.

The speaker was Dr. Frederick C. Whittier, Jr., Professor of Medicine and Chief, Nephrology Section, WVU School of Medicine, Morgantown. His topic was "Treatment of Hypertension With Impaired Renal Function."—Ali H. Morad, M.D., Secretary.

Writers' Mental Illness Rate High

Extremely high rates of mental illness have been found among a group of successful creative writers as well as their parents, siblings and offspring (first-degree relatives). An astonishing 80 per cent of the writers had suffered depression or manic-depression.

Nancy C. Andreasen, M.D., Ph.D., Professor of Psychiatry, University of Iowa College of Medicine, over the course of 15 years studied 30 visiting faculty at the University of Iowa Writer's Workshop. The writers were compared with 30 individuals of similar socioeconomic background, I.Q., education and age who were in a variety of nonartistic professions (lawyers, social workers, etc.).

The 80 per cent of the writers who had ever suffered a mood disorder—depression or manic-depression (bipolar disorder)—contrasted sharply with the 30 per cent among the comparison group, even though the latter also had a higher incidence than the general population.

Most striking was that 43 per cent of the writers suffered manic-depression. They were subject to depressions alternating with euphoria, recklessness and high energy. However, writers tended not to be creative during these highs and lows; they usually wrote during emotionally normal periods.

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New Members

The following physicians were welcomed in February as new members of the West Virginia State Medical Association:

Brooke

John Dombrosky, D.O., PO Box 550, Follansbee 26037

Central

Ralph A. Stalnaker, M.D., Route 1, Box 43-A, Sutton 26601, Internal Medicine/Emergency Medicine

Greenbrier

Keith M. Holmes, M.D., PO Box 588, Lewisburg 24901, Otorhinolaryngology

Hancock

Luis P. Torres, M.D., 857 Main Street, Follansbee 26037, General Practice

Harrison

Rani K. Kumar, M.D., 350 Buckhannon Avenue, Clarksburg 26301, Emergency Medicine/Pediatrics

Joseph H. Liput, Jr., M.D., 122 Carriage Lane, Bridgeport 26330, Nephrology/Internal Medicine

David L. Waxman, M.D., 300 Davisson Run Road, Sutie 101, Clarksburg 26301, Orthopedics

Marion

Marion A. Bechtold, Fairmont Clinic, PO Box 1112, Fairmont 26554, Internal Medicine

Jeffrey Friedman, D.O., Fairmont Clinic, PO Box 1112, Fairmont 26554

Marshall

Shafqat P. Farooqi, M.D., 426 8th Street, Glen Dale 26038, Internal Medicine/Cardiology

David M. Nally, M.D., 426 8th Street, Glen Dale 26038, Emergency Medicine

Mercer

William A. Merva, M.D., Princeton Medical Arts Clinic, Route 20, Princeton 24740, Neurology

Albert J. Paine, Jr., M.D., 2120 Mountain View, Bluefield 24701, Otorhinolaryngology

Mingo

Timothy L. Jameson, D.O., Star Route 49, PO Box 410, Matewan 25678-0410

Monongalia

John B. Bodensteiner, M.D., WVU Medical Center, Morgantown 26505, Neurology

Anthony E. Clark, M.D., 300 Wedgewood Drive, Morgantown 26505, Internal Medicine

Jane M. Kotchen, M.D., WVU Medical Center, Dept. of Medicine, Morgantown 26506, Internal Medicine

Philip J. Mayer, M.D., WVU Medical Center, Dept. of Orthopedics, Morgantown 26506, Orthopedics

Joann A. O'Keefe, M.D., 300 Wedgewood Drive, Morgantown 26505, Internal Medicine

Stephen R. Powell, M.D., PO Box 620, Morgantown 26507, Ophthalmology

Ohio

Steven C. Miller, M.D., Professional Center III, Suite 220, Wheeling 26003, Orthopedic Surgery

Parkersburg

Michael Moses, M.D., 600 18th Street, Parkersburg 26101, Internal Medicine

South Branch

Clarence E. King, M.D., 114 Virginia Avenue, Petersburg 26847

Residents

Marian J. Coorham, M.D., 7231 Osceola Drive, Cincinnati, OH 45243-2224

Nancy L. Craig, M.D., Route 1, Box 312, Thornton 26440

Sabrina D. Craigo, M.D., Apartment 6, 2800 Hart Street, Charleston 25304

Christine R. Kincaid, M.D., Dept. of Medicine, WVU Hospital, Morgantown 26505

Lois McLanchlan, M.D., Dept. of OB/GYN, WVU Hospital, Morgantown 26505

Victor F. Nease, M.D., 105 29th Street, SE #10 Charleston 25304

George R. Robinson, II, M.D., 321F Brentwood Drive, York, PA 17403

Ronald J. Sutor, M.D., Apartment 22, 3000 Staunton Avenue, Charleston 25304

Students

Richard F. Ammar, Jr., Apartment 4, 779 Chestnut Ridge Road, Morgantown 26505

Mark L. Benson, Apartment 4, 779 Chestnut Ridge Road, Morgantown 26505

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Obituaries

NABIL A. RAGHEB, M.D.

Dr. Nabil A. Ragheb, an otolaryngologist with The Eye and Ear Clinic of Charleston, died February 20 in a plane crash near Elkins. He was 42.

A native of Egypt, Doctor Ragheb was a graduate of the Alexandria (Egypt) University Faculty of Medicine. He completed surgical internships with Alexandria University and Cook County Hospital in Chicago, and surgical residencies with Al Moassat Hospital in Alexandria, Alexandria University Faculty of Medicine, and St. Joseph Hospital in Chicago. He also completed an otorhinolaryngology residency with the University of Connecticut School of Medicine.

Doctor Ragheb joined the Eye and Ear Clinic in 1980 and specialized in head and neck surgery and facial plastic surgery.

He was a Fellow of the American College of Surgeons, American Board of Otolaryngology, American Academy of Otorhinolaryngology, Head and Neck Surgery; International College of Surgeons, and the American Academy of Facial Plastic and Reconstructive Surgery. He was a member of the Kanawha Medical Society, West Virginia State Medical Association, American Medical Association, and the Southern Medical Association.

Survivors include his wife, Mrs. Jill Ragheb; the parents, Dr. and Mrs. Amin Ragheb of Alexandria, and a sister, Dr. Amira Halel of Charleston.

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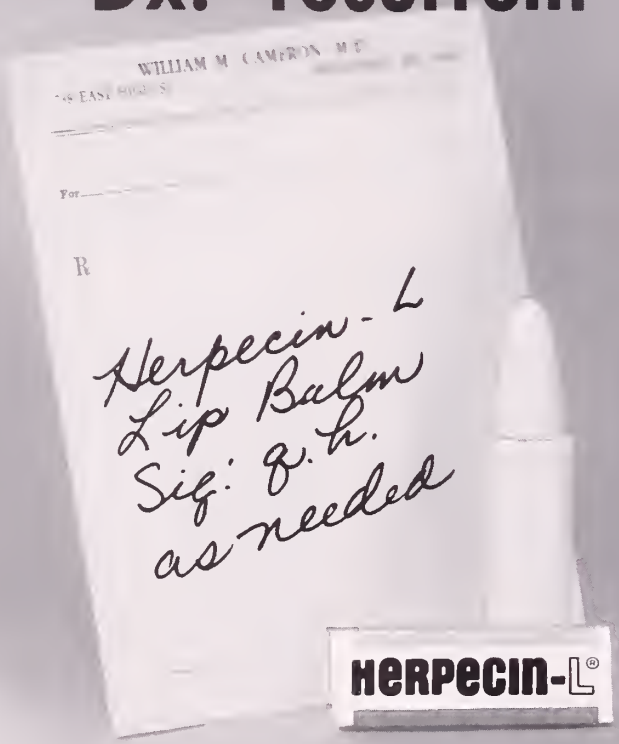

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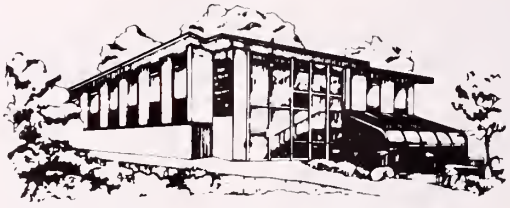

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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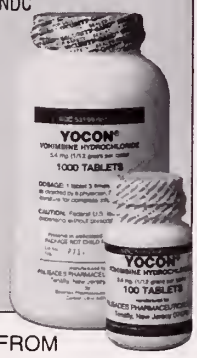

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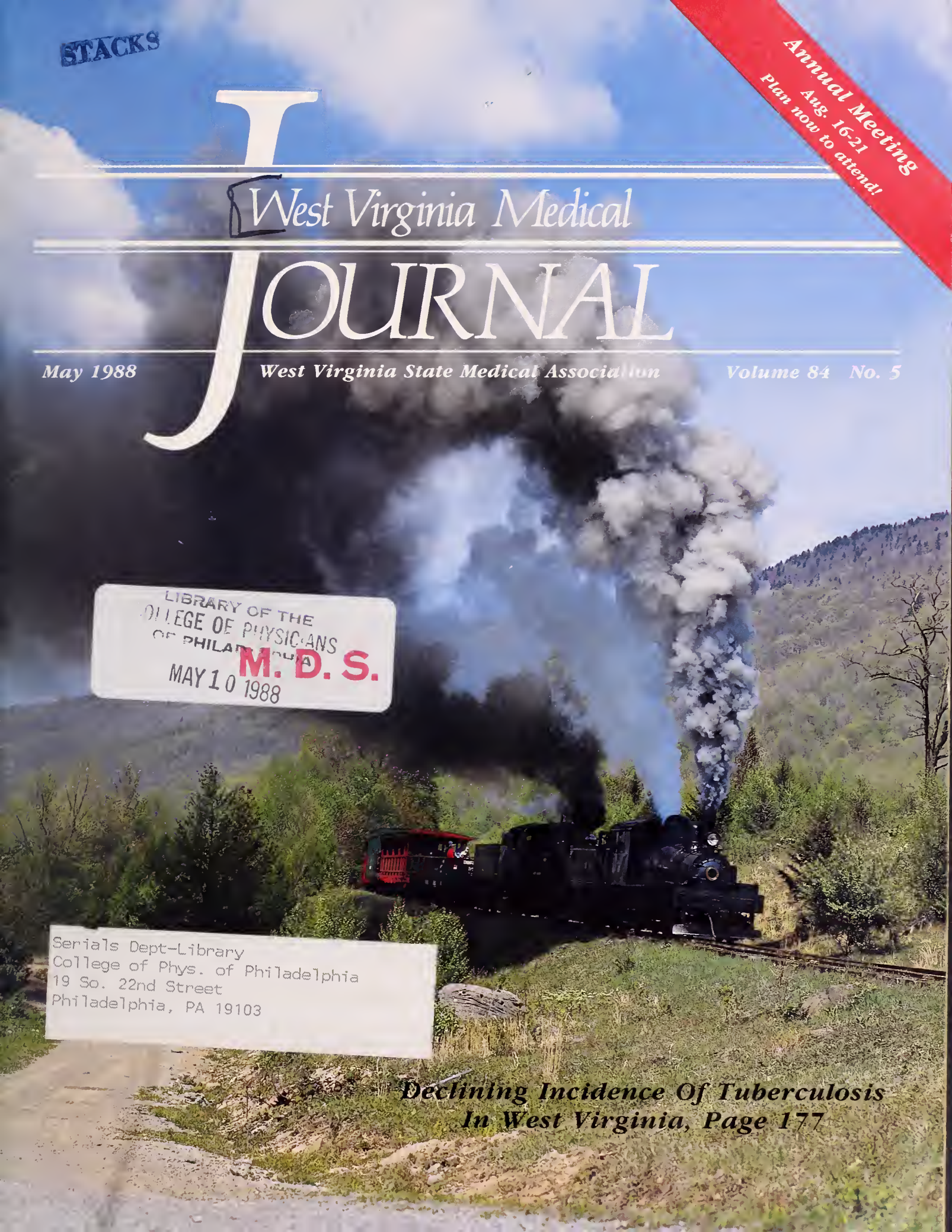

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West Virginia Medical JOURNAL

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Cass Scenic Railroad, a state-operated tourist attraction. Two old-time Shay engines haul visitors 11 miles to the summit of 4,500-foot Bald Knob. Opens Memorial Day. Photo courtesy of *Wonderful West Virginia* Magazine. Arnout Hyde, Jr., photographer.

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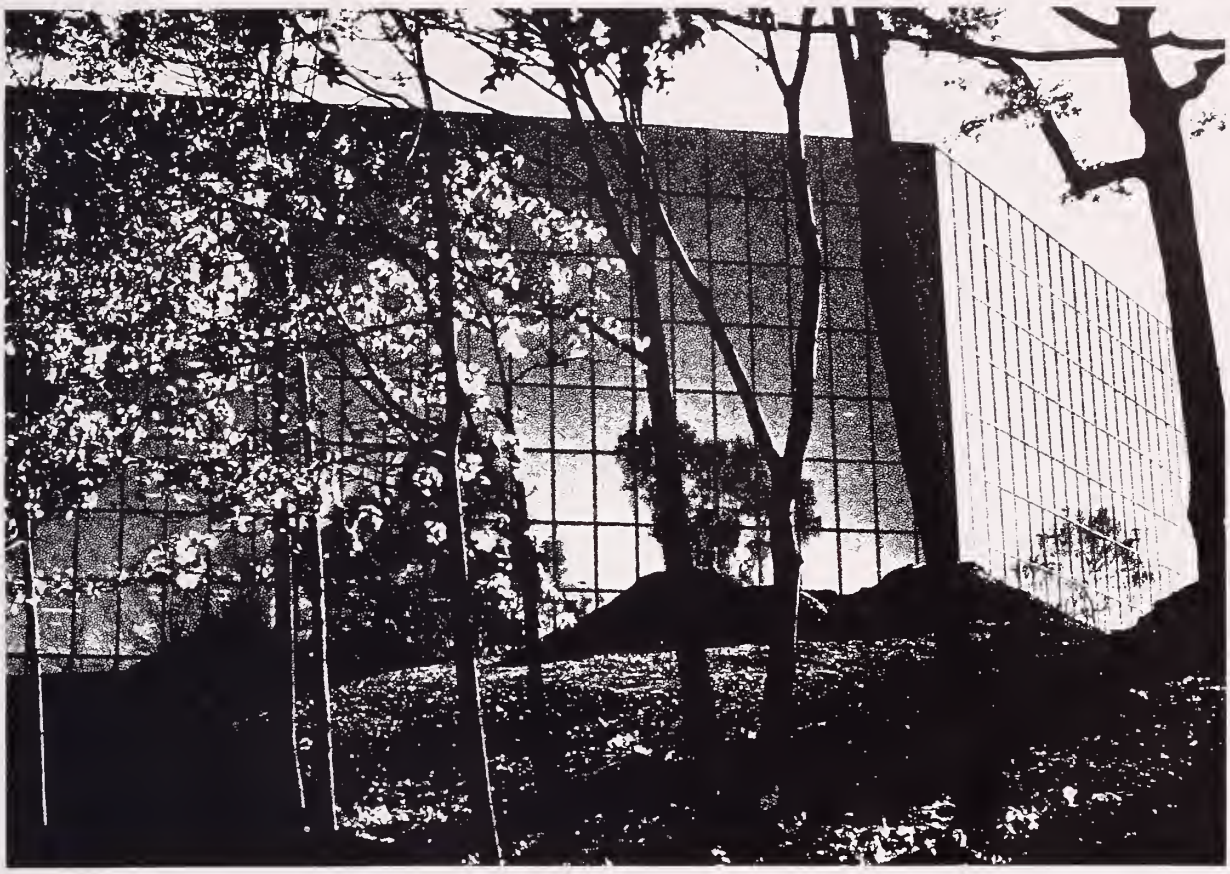

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Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Please note that *in vitro* data may not correlate with clinical experience. Bactrim is contraindicated in infants less than two months of age, in pregnancy at term, during lactation, and in documented megaloblastic anemia due to folate deficiency. Maintain adequate fluid intake.

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Bactrim™ DS

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References: 1. Rubin RH, Swartz MN: *N Engl J Med 302*:426-432, Aug 21, 1980 2. BAC-DATA Medical Information Systems, Inc., Volume I, 1986.

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CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides, documented megaloblastic anemia due to folate deficiency, pregnancy at term and during the nursing period, infants less than two months of age.

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.

BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.

PRECAUTIONS: *General.* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related.

Use in the Elderly. May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see DOSAGE AND ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS): AIDS patients may not tolerate or respond to Bactrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with Bactrim in non-AIDS patients.

Information for Patients. Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests. Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.

Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.

Drug/Laboratory Test Interactions. Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Carcinogenesis. Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis.* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility.* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.

Pregnancy. Teratogenic Effects. Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects. See CONTRAINDICATIONS section.

Nursing Mothers. See CONTRAINDICATIONS section.

Pediatric Use. Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).**

Hematologic. Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions.* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary.* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic.* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric.* Hallucinations, depression, apathy, nervousness. *Endocrine.* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Respiratory.* Pulmonary infiltrates. *Musculoskeletal.* Arthralgia, myalgia. *Miscellaneous.* Weakness, fatigue, insomnia.

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN. *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired.* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.

ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS. Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.

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HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).

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The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

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Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

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Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

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1. Ann Intern Med 1982;96:766-71.

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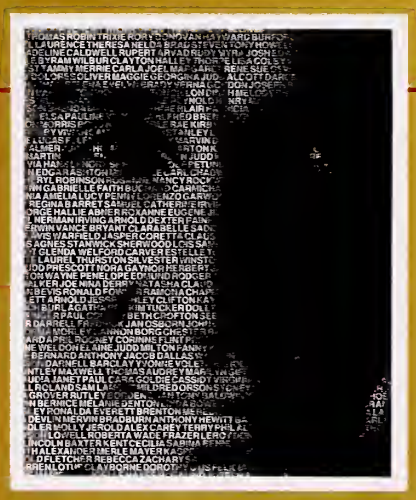

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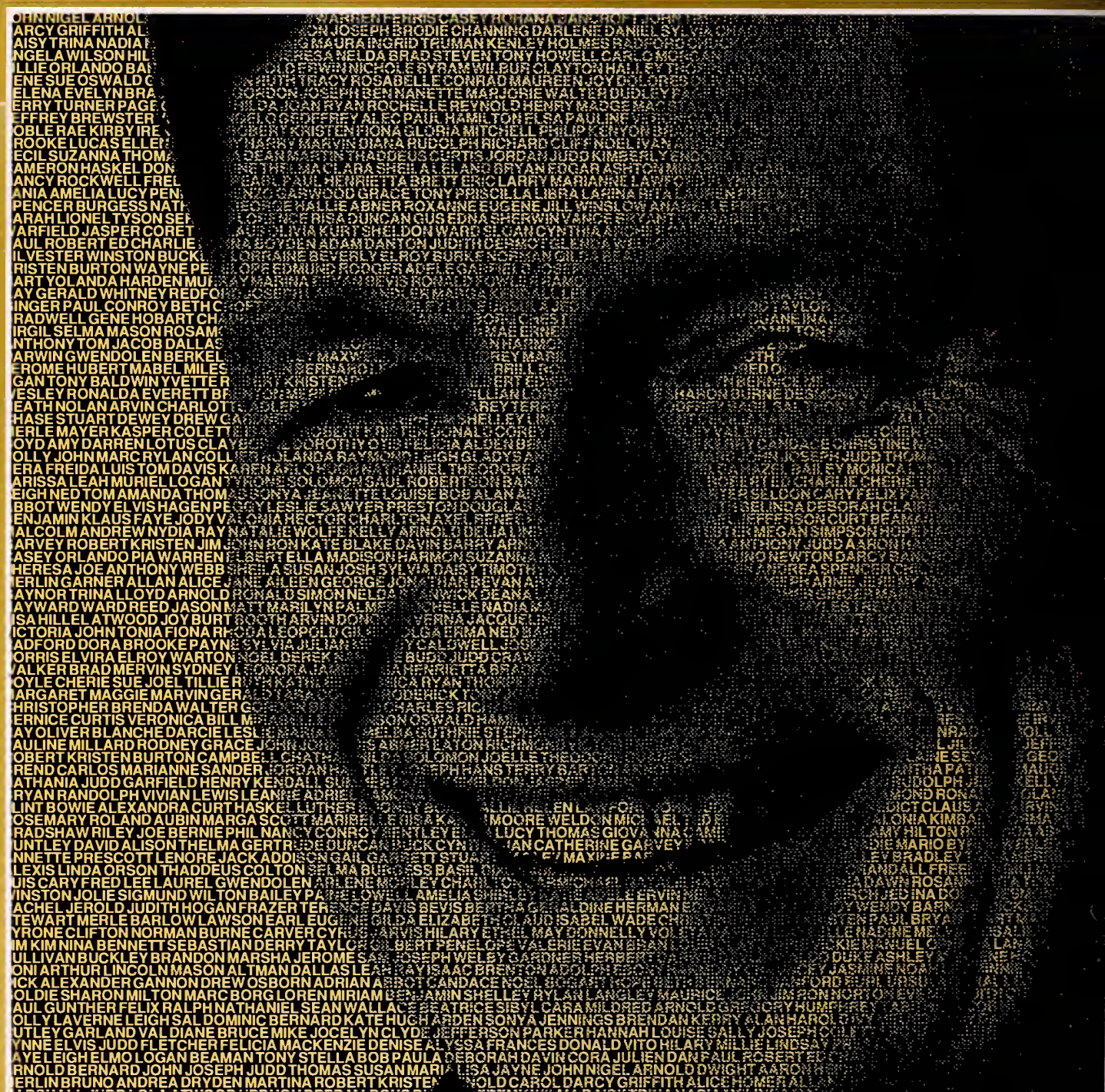

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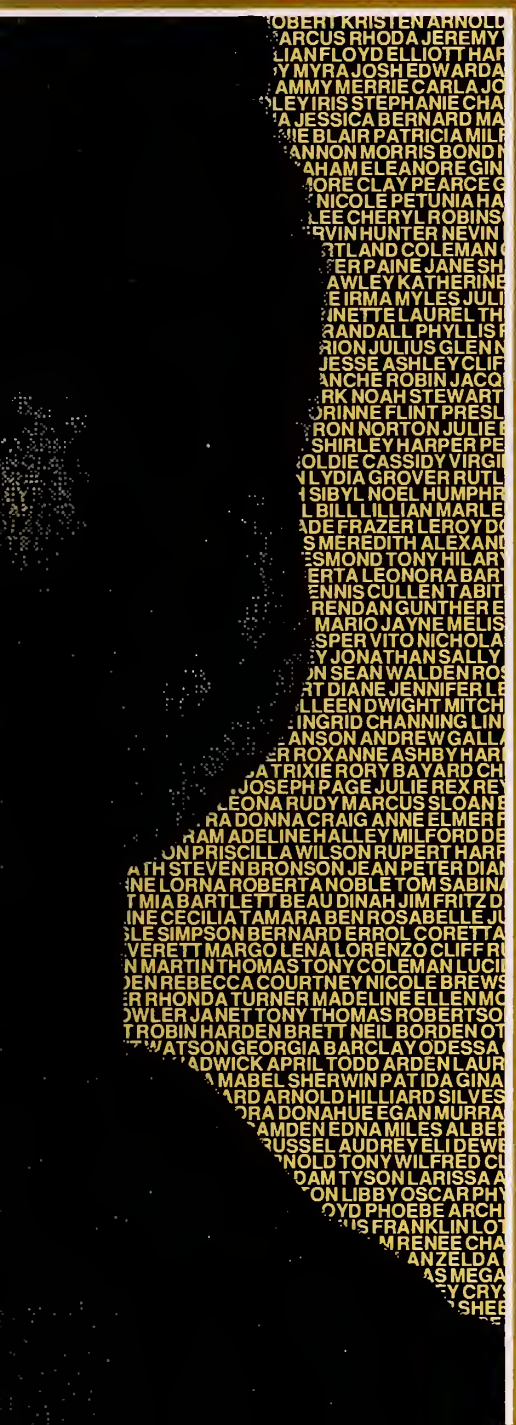

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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In West Virginia, 1960-1984

The Declining Incidence And Changing Epidemiologic Pattern Of Tuberculosis

ROY C. BARON, M.D., M.P.H.
Acting Director, Office of Epidemiology and Health Promotion, West Virginia Department of Health, Charleston; and Medical Epidemiologist, Division of Field Services, Epidemiology Program Office, Centers for Disease Control, Atlanta, Georgia

The incidence of tuberculosis in West Virginia has decreased from the early 1960s through the early 1980s. Trend analyses demonstrate reduced case rates for males and females, whites and nonwhites, and for all age groups. With the exception of the elderly (>65 years of age), age-specific case rates have decreased more rapidly and to lower levels than the comparable rates for the United States as a whole. A more rapid decrease for younger than older persons has resulted in a shift in the age distribution of tuberculosis in West Virginia — 90 per cent of all incident cases are in persons 35 years of age and older (50 per cent in the elderly).

At the same time, the very low rates for children suggest that the occurrence of new infection in West Virginia is approaching zero. Thus, the vast majority of persons currently infected are over the age (35 years) when chemoprophylaxis can be routinely recommended. We therefore recommend a selective approach to screening and more intensive surveillance in high-risk populations.

Introduction

One of the national health objectives is to reduce the incidence of tuberculosis to eight cases per 100,000 population by the year 1990 (1). Progress between 1978 and 1985, when the nationwide incidence decreased from 13.1 to 9.3 cases per 100,000, indicates the likelihood that this objective will be met (2). In West Virginia, the objective was surpassed in 1983, when the estimated crude incidence was 6.8 cases per 100,000; by 1985 the rate had declined to 5.6 cases per 100,000. Despite this success, the West Virginia Department of Health still allocates substantial resources for further control and the ultimate elimination of tuberculosis. These are reasonable goals based on the epidemiology and natural history of the disease (3).

At the very least, efforts to contain or prevent the occurrence of disease in persons currently infected will curtail unnecessary transmission to uninfected persons. Another concern that justifies our continued vigilance against tuberculosis is the insurgence of the AIDS epidemic within West Virginia. Tuberculosis and other mycobacterial diseases have been associated with AIDS (4) as a likely consequence of compromised immunity induced by HIV infection favoring the activation of preexisting latent infection (5). With evidence of an increasing prevalence of HIV infection in West Virginia (6), it is possible that otherwise unanticipated clusters of tuberculosis will occur, requiring intensive case identification and disease-control activities. As of mid-1987, two persons with both AIDS and tuberculosis have been identified in West Virginia, but this number is expected to grow considerably.

The decrease in the rate of tuberculosis has been recorded for the entire nation since 1953 when uniform national reporting of tuberculosis cases was fully implemented. In this paper, we review the tuberculosis morbidity trends in West Virginia from 1960 through 1984 and compare them with the United States for the purpose of: 1) demonstrating West Virginia's success in reducing the occurrence of this disease, 2) describing the changing epidemiologic pattern of tuberculosis in West Virginia, and 3) discussing the implications that these changes have for current control strategies.

Methods

We included all new cases of tuberculosis reported to the West Virginia Department of Health from 1960 through 1984. The current criteria for reporting are those recommended by the United States Public Health Service (7) and include

TABLE 1

Average Annual Case Reports of Tuberculosis, by Sex and By Race, West Virginia, 1960-64 and 1980-84

	1960-64			*1980-84*			*% Change In Rate*
	No. Cases	*%*	*Annual Rate/100,000*	*No. Cases*	*%*	*Annual Rate/100,000*	
All	604.2	100.0	32.5	162.4	100.0	8.3	−74
Male	401.4	66.4	45.3	116.2	71.6	12.3	−73
Female	202.8	33.6	21.5	46.2	28.4	4.6	−79
White	534.4	88.4	30.2	141.8	87.2	7.6	−75
Nonwhite	69.8	11.6	77.3	20.6	12.8	27.5	−64

both pulmonary and non-pulmonary disease with either: 1) positive bacteriology or 2) a positive skin test and clinically or radiographically compatible illness in a person for whom a decision was made to initiate treatment with two or more antituberculous drugs. Cases include persons who may have had the disease in the past but in whom disease fulfilling the above criteria recurred.

Case reports were grouped by ages 0-14, 15-24, 25-44, 45-64, and 65 years or older; sex; and race (white/nonwhite). Due to large variations in relatively small numbers from year to year, annual figures were aggregated into five five-year periods, 1960-64 through 1980-84. Average annual rates were based on the West Virginia population in the first year of each period. The 1960, 1970, and 1980 populations were obtained from figures published by the United States Bureau of the Census (8-10) while those for 1965 and 1975 were estimated by interpolation.

To compare the incidence in West Virginia with that of the United States, we used the method of indirect standardization to adjust for the age, sex, and racial differences. The standardized rates in West Virginia for the periods 1960-64 and 1980-84 were derived from the observed case numbers in those periods compared to the expected case numbers based on national age-, sex-, and race-specific rates reported by the Division of Tuberculosis Control, Centers for Disease Control for 1962 and 1982. The observed/expected ratio (standardized rate ratio) expresses the relative morbidity excess (ratio >1.0) or deficit (ratio <1.0) in West Virginia compared with the nation. This ratio multiplied by the national rate gives an adjusted rate for West Virginia.

Results

The average yearly number of tuberculosis cases reported in West Virginia decreased from 604 in 1960-64 to 162 in 1980-84 (Table 1). This reflects a 74-per cent reduction in the crude incidence between the first and the last period, from an average of 32.5 annual cases per

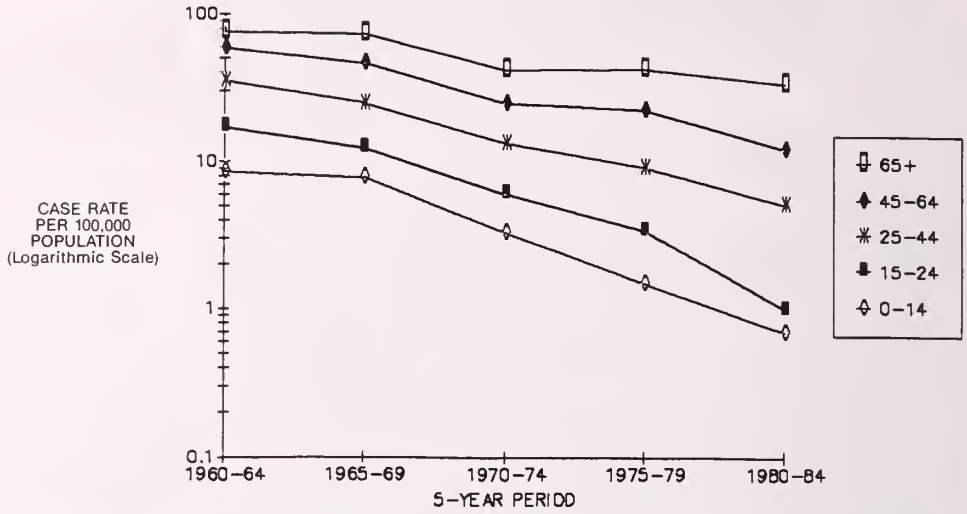

Figure 1. Trends in Tuberculosis Incidence, by Race and Sex, West Virgina, 1960-64 Through 1980-84

100,000 population to 8.3 annual cases per 100,000 population. The rate decreased more rapidly for whites (75 per cent) than for nonwhites (64 per cent) and slightly more rapidly for females (79 per cent) than for males (73 per cent). The percentage of cases contributed by nonwhites, who constitute 3.8 per cent of the population in West Virginia (1980 census), increased from 11.6 per cent in 1960-64 to 12.8 per cent in 1980-84.

In the same period, the percentage of cases in males increased from 66.4 per cent to 71.6 per cent. As shown in Figure 1, white females experienced the lowest morbidity rates and underwent the greatest percentage decrease (79 per cent) while nonwhite males experienced the highest morbidity rates and underwent the smallest percentage decreases (73 per cent and 71 per cent, respectively).

The decrease in the rate of tuberculosis was also observed for each age group (Figure 2). As noted above for sex/race-specific groups, the rate of decrease was inversely related to the magnitude of the incidence. For example, the rate for the elderly (>65 years of age), who have experienced the highest tuberculosis case rates, decreased the least (55 per cent). The youngest groups, 0-14 and 15-24 years of age, who have experienced the lowest rates, have undergone the most substantial decrease in disease incidence (91 per cent and 94 per cent, respectively). Because the incidence has decreased more slowly for the elderly than for all other ages, the proportion of tuberculosis cases in West Virginia contributed by persons 65 years of age and

TABLE 2
Average Annual Tuberculosis Case Rates By Age, West Virginia 1960-64* and 1980-84 and United States, 1962 and 1982**

	1960-64				*1980-84*				*% Change in Rate*	
	W.V.	*U.S.*	*Standardized Ratio*	*(95% CI)*	*W.V.*	*U.S.*	*Standardized Ratio*	*(95% CI)*	*W.V.*	*U.S.*
All	37.9	28.7	1.3	(1.3,1.4)	11.1	11.0	1.0	(0.9,1.1)	-71	-62
65+	75.0	56.4	1.3	(1.2,1.4)	38.5	27.9	1.4	(1.2,1.5)	-49	-51
0-64	33.9	25.9	1.3	(1.3,1.4)	7.1	8.8	0.8	(0.7,0.9)	-79	-66
45-64	63.6	46.1	1.4	(1.3,1.5)	16.6	17.3	1.0	(0.8,1.1)	-74	-62
25-44	44.6	33.3	1.3	(1.2,1.4)	8.6	10.4	0.8	(0.6,1.0)	-81	-69
25-24	21.7	18.2	1.2	(1.0,1.4)	1.5	4.8	0.3	(0.2,0.5)	-93	-74
0-14	11.5	10.4	1.1	(1.0,1.3)	1.1	2.7	0.4	(0.2,0.7)	-91	-74

*Indirectly standardized to U.S. rates, 1962
**Indirectly standardized to U.S. rates, 1982

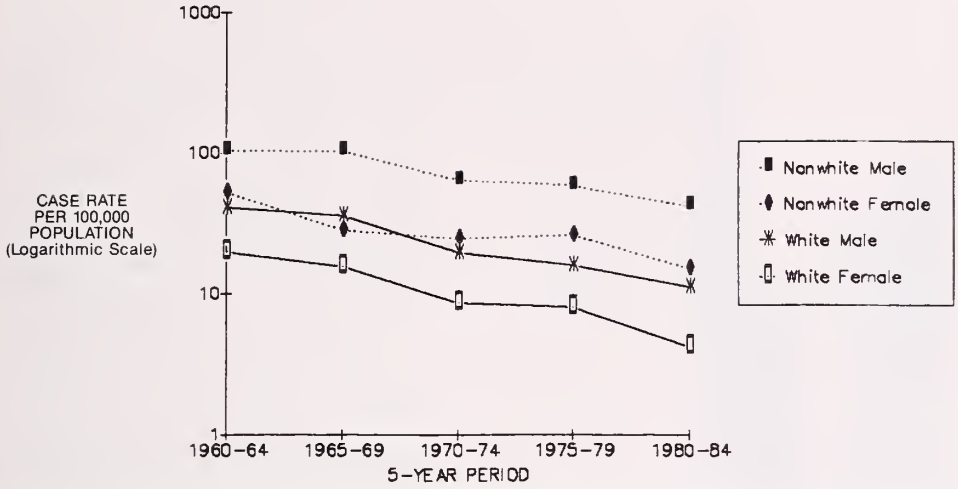

Figure 2. Age-Specific Trends in Tuberculosis Incidence, West Virginia, 1960-64 Through 1980-84

older has increased from 21.6 per cent in 1960-64 to 49.9 per cent in 1980-84 while the proportion contributed by each younger group has decreased (Figure 3). Children (0-14 years of age) in particular, who accounted for 258 (8.5 per cent) of the reported cases in 1960-64 (51.6 cases per year), accounted for only 16 (2.0 per cent) cases in 1980-84 (3.2 cases per year).

Overall, tuberculosis rates have decreased more rapidly in West Virginia than in the nation as a whole (Table 2). Reflecting substantially greater disease rates for all age groups in the past, the standardized incidence in West Virginia was 32 per cent above the national level during the 1960-64 period. By 1980-84, the incidence in West Virginia was similar to that of the United States. This resulted from comparatively greater rate decreases for West Virginia in each age group under 65 years of age. For all persons under age 65, the incidence in West Virginia went from 31 per cent above the national level in 1960-64 to 19 per cent below by 1980-84. Persons 15-24 years of age and children had the lowest incidence relative to national levels in 1980-84, with standardized rate ratios of 0.3 and 0.4, respectively. Among the elderly in West Virginia, the incidence of tuberculosis decreased almost in parallel with that of the nation, and by 1980-84 remained 38 per cent above the national level.

Discussion

These data demonstrate a substantial reduction in the incidence of tuberculosis in West Virginia since the early 1960s. The decreasing tuberculosis case rate reflects trends that have benefited males and females, whites and nonwhites, and all age groups. Moreover, when compared to national rates, the incidence in West Virginia has decreased more rapidly, from a 32-per cent higher rate in 1960-64 to a similar rate by 1980-84. The more rapid rate decrease in West Virginia has been driven by substantial decreases in all groups <65 years of age, among whom the collective incidence went from 31 per cent above to 19 per cent below the national level.

While there also has been a substantial decrease in the incidence among persons >65 years of age, the adjusted rate of decline in West Virginia for this group was similar to that of the national trend. The elderly are currently the only age group in West Virginia whose reported tuberculosis incidence exceeds the national level.

Because the risk of disease in infected persons who remain untreated extends over a lifetime, the occurrence of tuberculosis in older persons commonly reflects infection acquired in the remote past (3,11). On the other hand, disease in younger persons, whose potential time frame for infection is more limited, is a more specific indicator of recent trends in the spread of infection. Consequently, the dramatic decrease in morbidity among children in West Virginia and their currently very low case rates serve as strong evidence that the rate of transmission, or the incidence of new infection, is approaching zero. This is supported by the data from routine testing of preschool children (under age five) and of school-age children (5-14 years) in 1985-86 when only six of 16,878 (0.04 per cent) of the former and 55 of 25,363 (0.22 per cent) of the latter reacted to tuberculin (unpublished data, West Virginia Department of Health).

Slower decreases in rates observed for older groups are due to the impact of disease arising from infection acquired in the more distant past. Similarly, the slower decreases in rates for males (compared with females) and nonwhites (compared with whites) probably also reflect greater prevalences of pre-existing infection in these groups.

As the group that has benefited least from the decreasing tuberculosis infection rate, the elderly now contribute the greatest proportion of cases, their representation among reported cases having more than doubled since 1960-64. Stated differently, because of the decreasing risk of infection, the epidemiology of tuberculosis is now being dominated by persons who were infected in the more remote past (11). While the growing percentage of cases involving the elderly indicates our success in controlling transmission, it also suggests that we reassess our strategies for further control of tuberculosis.

Despite evidence that the rate of new infection is approaching zero, elimination of the disease will not be realized until all persons currently infected (who remain at risk of disease and who constitute the reservoir) can be treated prophylactically or have been replaced by younger, uninfected cohorts (3).

The prospect of aggressively diminishing the asymptomatic reservoir with preventive INH therapy is complicated by the risk of hepatatoxicity (12). This risk is thought to outweigh the risk of disease in skin-test-positive persons

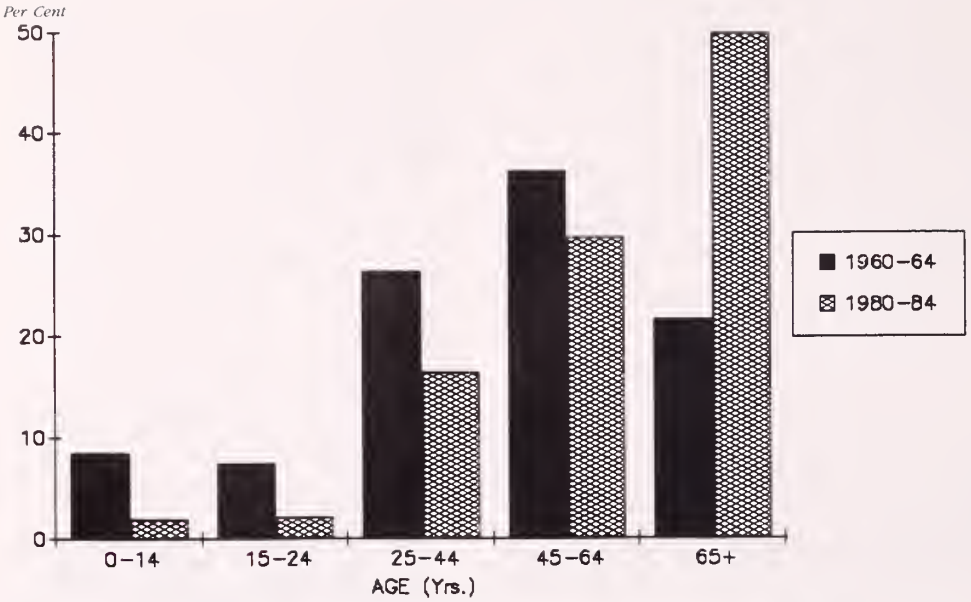

Figure 3. Per cent of Reported Tuberculosis Cases by Age, West Virginia, 1960-64 and 1980-84

older than 35 years unless they have additional risk factors. With 50 per cent of the cases in West Virginia occurring in the elderly and approximately 90 per cent in persons older than 35, the vast majority of those found to be at risk by mass screening efforts targeted at well populations would not be candidates for chemoprophylaxis. At the same time, since the current risk of acquiring infection in the general population is very small, screening procedures that do not target high-risk groups will yield little in terms of identifying newly infected persons. These are costly, time-consuming activities. Specifically, little benefit can be gained by screening children or by routinely repeating skin tests of others (such as school teachers) who are not known to have been associated with an active case.

The alternative is to focus resources on maintaining close surveillance over persons known to be at higher risk, to identify and diagnose rapidly new cases, and to contain spread by prompt treatment of persons with tuberculosis with an effective antituberculosis regimen and by identification of infected contacts to provide them with preventive therapy. This approach is entirely consistent with the recommendations of the American Thoracic Society and the Centers for Disease Control.

In summary, surveillance data reported in this article demonstrate a dramatic decrease in the occurrence of tuberculosis in West Virginia and, by inference, in the rate of transmission of infection. The greatest obstacle to the ultimate elimination of tuberculosis remains the potential for disease to occur in currently infected persons who are asymptomatic. The overwhelming majority of these persons are beyond the age (35 years) when prophylactic chemotherapy can be routinely recommended. Accordingly, we recommend that tuberculosis-control activities be modified to eliminate unnecessary routine screening of populations with only a slight risk of acquiring infection (virtually all healthy persons with no known patient contact) or for whom chemoprophylaxis would be contraindicated. In addition, resources should be redirected to intensify surveillance for disease (particularly in the elderly), to ensure patient compliance with a therapeutic regimen to which the organism is sensitive, and to identify, evaluate, and provide preventive therapy for case contacts and other persons known to be at high risk.

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Dobutamine For Myocardial Depression In Meningococcemia

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In a patient with meningococcemia, shock and myocardial depression persisted while being treated with dopamine. The addition of dobutamine resulted in a sustained increase in cardiac output, cardiac index, and stroke volume index. Dobutamine can be used effectively in combination with dopamine to treat the myocardial depression of meningococcemia.

Introduction

Septic shock is one of the complications of *Neisseria meningitidis* bacteremia. Myocardial failure can also contribute to the shock state. Hardman documented myocarditis in 78 per cent of the patients in one autopsy series of 200 fatal meningococcal infections (1). The myocarditis was more severe and four times as frequent in the patients with meningococcemia than with meningitis alone (1). Meningococcemia produces a higher incidence of early impairment of myocardial contractility and cardiogenic shock than bacteremia caused by Gram-negative bacilli (2).

Gram-negative septic shock is manifested by decreases in intravascular fluid volume, systemic vascular resistance (SVR) and myocardial function (3). Treatment usually includes volume replacement and the inotropic agents, dopamine and dobutamine. In septic shock, dopamine increases the blood pressure primarily by an increase in cardiac index (CI) with a minimal increase in SVR (4). Dobutamine also increases the CI in septic shock and has variable effects on SVR (5,6). Dobutamine raised the SVR if initially low or decreased the SVR if initially high in one study (5) but consistently resulted in a decrease in SVR in another study (6). Dopamine has been considered to be the most suitable drug for septic shock because of its vasopressor effect, but dobutamine may be more effective in cases with elevated SVR or if dopamine becomes ineffective after 24 to 50 hours of infusion (6).

A combination of dopamine and dobutamine has been used to treat the shock caused by meningococcemia (6). We report a case of meningococcemia in which shock persisted in spite of fluid replacement and normalization of systemic vascular resistance with dopamine. When dobutamine was added, there were increases in cardiac output, cardiac index and stroke volume index.

Case Report

A 45-year-old white woman in previously good health was admitted to West Virginia University Hospital (WVUH) with Group B meningococcemia without meningitis. Complications included purpura fulminans, adult respiratory distress syndrome, disseminated intravascular coagulopathy, acute renal failure, and shock, the focus of this report.

Fourteen hours prior to admission, the patient developed fever and chills. Twelve hours later, ambulance personnel measured a blood pressure of 50 mmHg and treated her with intravenous fluids. On arrival at the emergency room, her blood pressure was not palpable but was 90 mmHg by doppler. Heart rate was 120 beats per minute. After additional fluids, her blood pressure rose to 140/60 mmHg. Cardiac examination revealed a regular tachycardia without murmur or gallop.

Initial hemodynamic measurements in the intensive care unit showed myocardial depression with a cardiac output (CO) of 3.7 liters per minute, a CI of 2.26 L/min/M², a stroke volume index (SVI) of 18.2 mL/M², a pulmonary capillary wedge pressure (PCWP) of 17 mmHg, and a systemic vascular resistance (SVR) of 1350 dynes SEC CM-⁵ while on dopamine 10 ug/kg/min.

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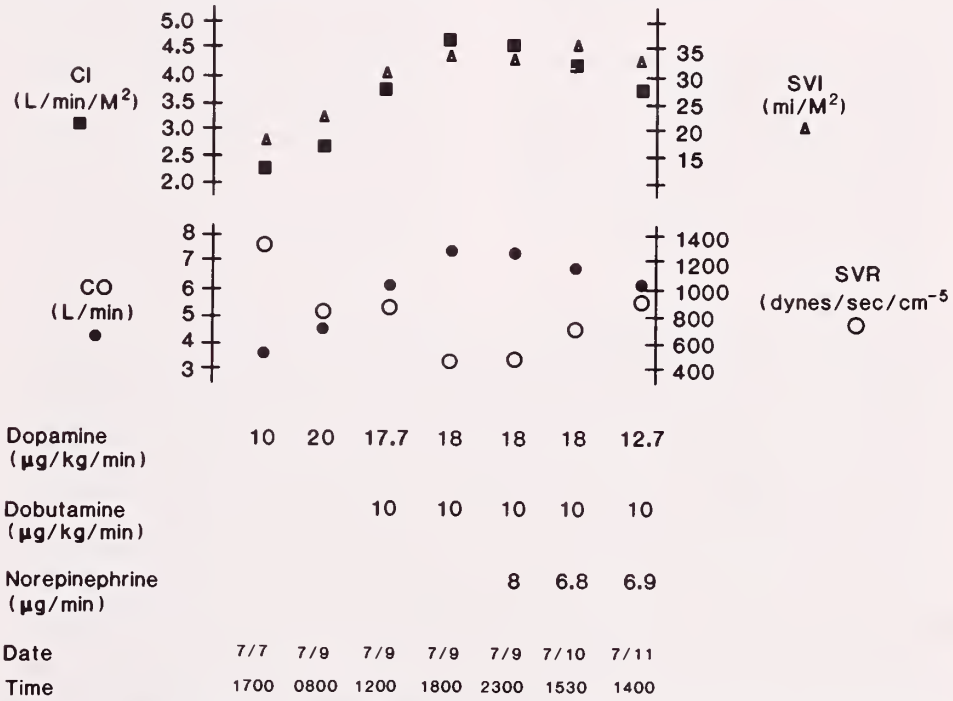

Figure. Cardiac Output (•), Systemic Vascular Resistance (○), Cardiac Index (■), and Stroke Volume Index (△) compared at various times with dosages of dopamine, dobutamine, and norepinephrine.

(Continued From Page 181)

On day three, the patient became hypotensive (86/54 mmHg) with a CO of 4.5 L/min, a CI of 2.74 L/min/M^2, and SVI of 22.9 mL/M^2, an SVR of 836 dynes SEC CM^{-5}, and a PCWP of 24 mmHg while on dopamine 20 ug/kg/min. With the addition of dobutamine 10 ug/kg/min, the cardiac output rose to 6.08 L/min and the CI rose to 3.71 L/min/M^2, with a stable SVR of 855 dynes SEC CM^{-5} initially. A two-dimensional echocardiogram at this point showed no pericardial fluid and an ejection fraction of 50 per cent indicating mild left ventricular dysfunction. Her blood pressure initially rose to 90/60 mmHg, then 104/60 mmHg after initiation of dobutamine but nine hours later dropped to 80/44 mmHg with a CO of 7.43 L/min, a CI of 4.53 L/min/M^2, and an SVR of 463 dynes SEC CM^{-5}.

Norepinephrine 8 ug/min was then begun with stabilization of blood pressure and SVR. Her cardiac output remained greater than six L/min while dopamine and norepinephrine were gradually tapered. Dopamine and norepinephrine were discontinued on the sixth day while dobutamine was discontinued on the seventh day.

She recovered from the meningococcemia with normal renal function and was discharged on the 73rd hospital day. The only permanent sequelae were multiple toe amputations and lower-extremity skin lesions requiring grafting.

Discussion

This patient exhibited shock and significant myocardial depression within hours after the onset of symptoms of fever and chills. The initial Swan-Ganz catheter measurements demonstrated normalization of SVR while on dopamine and a decreased cardiac output of 3.7 L/min that was not corrected by dopamine alone. These findings are consistent with early onset of myocardial depression in meningococcemia (2). Dobutamine was added, resulting in increases in CO, CI and SVI. These findings confirm that myocardial depression was a significant component of shock in this patient, and that dobutamine can be effective therapy as an inotropic agent in meningococcemia including cases in which the inotropic effect of dopamine is inadequate.

It is possible that the sudden drop in SVR and blood pressure nine hours after initiation of dobutamine was a direct effect of dobutamine on SVR. However, the SVR was stable for six hours after dobutamine was initiated. The restoration of SVR and blood pressure that occurred with administration of norepinephrine raises the possibility that endogenous depletion of norepinephrine was responsible for the drop in SVR. Some studies have shown that norepinephrine stores in myocardial nerve endings can become depleted in chronic heart failure (8). Depletion of norepinephrine could occur in meningococcemia either in the myocardium or in other sites. Some authors have suggested insensitivity of the myocardium to catecholamines as the mechanism for myocardial depression in septic shock (7, 9). Persistent sepsis was discounted because the patient had been treated with penicillin G since admission and blood cultures were all negative after the initial ones that grew meningococcus.

Myocardial depression can be a significant component of the shock caused by meningococcemia. Fatalities are more likely to occur in patients with evidence of myocardial dysfunction than in patients without myocardial dysfunction (9). Dobutamine can be used effectively in combination with dopamine as a positive inotropic agent in the treatment of the shock of meningococcemia. The possibility of a decrease in SVR during dobutamine infusion should be considered.

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Prophylactic VS PRN Naloxone

Treatment Of Pruritus Secondary To Epidural Morphine

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To assess the prophylactic efficacy of naloxone in the treatment of itching associated with epidural morphine, 45 parturient patients who underwent cesarean delivery with bupivacaine epidural anesthesia were given 5.0 mg of preservative-free morphine via epidural catheter postoperatively. Thirty-three patients received naloxone 0.4 mg/liter in $D_5$1/2NS by continuous intravenous infusion at maintenance rate, and 12 patients received 0.1 mg naloxone by intravenous bolus PRN itching, and $D_5$1/2NS intravenously at maintenance rate. Itching occurred in 67 per cent of the patients, with no significant difference ($p<.05$) in incidence between the two groups.

The mean time to onset of itching was 2.2 hours in each group. Mean duration was 14 hours in the prophylactic group and 20 hours in the PRN group; this difference was significant at $p<.05$. The mean score measuring intensity of itching was 3.3/10. There was no significant difference between the two groups with respect to intensity of itching or incidence of nausea and/or vomiting. No differences were noted between those patients who had a history of allergies and those who did not.

No patient experienced respiratory depression and, while realizing the potential for side effects, 44 of the 45 patients said they would have epidural morphine again.

The purpose of this study was to investigate the prophylactic efficacy of naloxone in the treatment of itching associated with epidural morphine administration.

The effective use of epidural opioids in man was first reported by Behan in 1979 (1). Analgesia is believed to be made possible through the existence of presynaptic and postsynaptic receptors in the substantia gelatinosa of the dorsal horn of the spinal cord as a major site of action (2). The most likely candidates for transmitters for these systems are serotonin and epinephrine (3,4,5). "Selective" blockade of pain by epidural opioids provides a therapeutic advantage over local anesthetic blockade due to the absence of sympathetic blockade and postural hypotension (2). Absence of sedation and much longer duration of analgesia provide advantage over parenteral opioids in the treatment of postoperative pain (6). However, epidural administration of opioids incurs a high incidence of pruritus, nausea and vomiting, urinary retention (6,7,8), and a very low incidence of respiratory depression (7,9,10).

The sensation of pruritus has been reported to occur in both chronic and postoperative pain patients, and appears around or just after the development of analgesia, and parallels its duration (11). Pruritus is not limited to segments of the spinal cord affected by the spinal opiate (7,11,12,13). Although systemic opioids, particularly morphine, are known to release histamine, the ability to antagonize the itching with antihistamines has been reported by some (14) and not by others (7). Small doses of parenterally administered naloxone have antagonized itching with intrathecal or epidural opiates (15,16,17,18). In some instances analgesia was maintained by naloxone, and in others it was reduced.

The reported incidence of pruritus has varied from none to little, to 50 per cent, and to 100 per cent. It occurs frequently in parturient women (5) and appears to be dose dependent (19). The incidence of pruritus severe enough to trouble the patient appears to be quite small (2).

Methods

Forty-five parturient women who underwent cesarean section for various reasons (Table) were given lumbar epidural anesthesia with 0.50 per cent bupivacaine (Marcaine) in doses of 100 mg to 175 mg preoperatively. This was accomplished with the patient in the sitting or lateral decubitus position,

TABLE
Patient Population and Reasons For Cesarean Section

NUMBER: 45	REASONS FOR C-SECTION:
AGE RANGE: 17 to 40 YEARS	PREVIOUS C-SECTION—13
MEAN AGE: 26.9 YEARS	CPD—11
ASA RISK CLASSIFICATION:	ARREST OF LABOR—6
CLASS 1—28	TWINS, AT LEAST ONE BREECH—4
CLASS 2—15	SEVERE PRE-ECLAMPSIA—3
CLASS 3—4	FETAL DISTRESS—2
GRAVITY AND PARITY:	BREECH—2
G_1P_0 —18	HERPES—1
G_1P_1 —16	ABRUPTIO PLACENTA—1
G_3P_2 — 8	
$G_3P_2Ab_1$— 2	
$G_9P_4Ab_4$— 1	

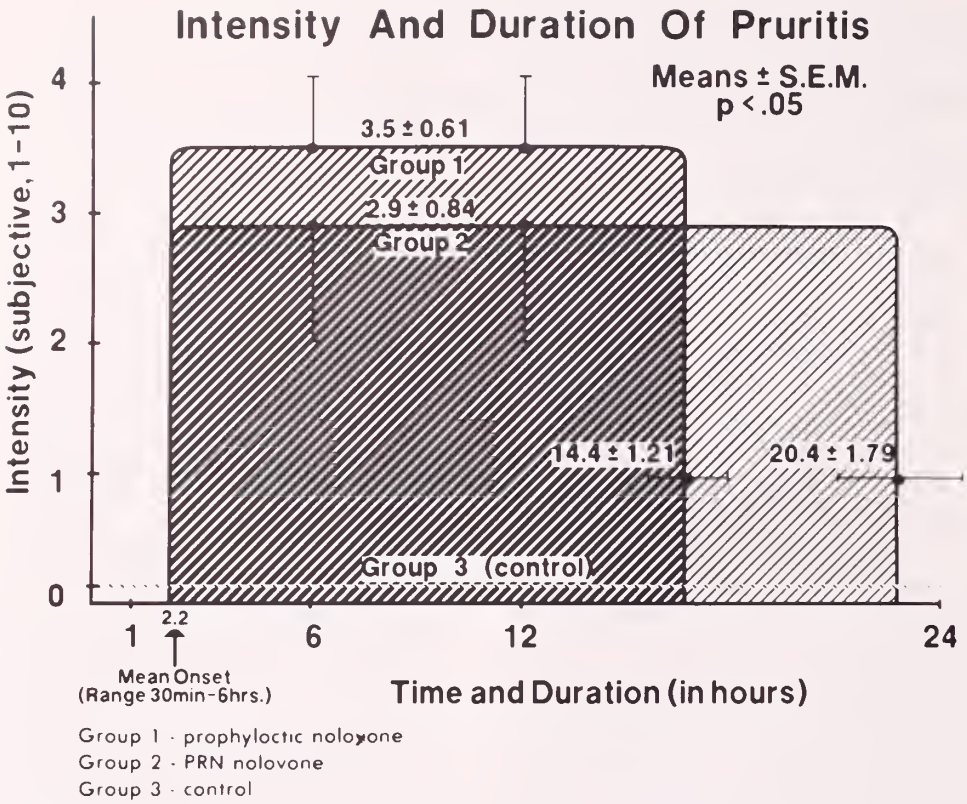

Figure 1.

and introduction of a 17 gauge Tuohy needle at the L_3-L_4 or L_2-L_3 spinous interspace. The epidural space was identified by a loss of resistance technique. Bupivacaine was then injected through the needle, and an epidural catheter was placed for subsequent redosing of bupivacaine and injection of morphine. Five milligrams of preservative-free morphine (Duramorph) were injected when the patient entered the recovery room, and the epidural catheter removed.

Prior to induction of epidural anesthesia, some patients were given alphaprodine (Nisentil) or butorphanol (Stadol), and some patients received oxytocin (Pitocin) for the induction of labor. All patients had urinary catheters in place for the first 24 hours following C-section.

Postoperatively, the 33 patients in Group 1 were given 0.4 mg of naloxone (Narcan) per liter of $D_5$1/2NS intravenously at maintenance rate over the first 24 hours. Patients in Group 2 received $D_5$1/2NS intravenously over the first 24 hours following epidural morphine, but were given naloxone 0.1 mg IV only on an as-needed basis, every 30 minutes intravenously. A control Group 3 received bupivacaine only.

Each patient was interviewed and questioned indirectly as to possible side effects at one, six, 12 and 24 hours following epidural morphine. Blood pressure and pulse were monitored at these same intervals, and respiratory rate was assessed every hour for the first 24 hours after the patient left the recovery room. Itching intensity was assessed on a scale of zero to 10 (zero-absent, one-minimal, five-moderate, 10-severe).

Respiratory depression, nausea and vomiting were also assessed by a single interviewer who knew the treatment groups. Finally, the patient was asked whether or not she would have epidural morphine again, knowing that it caused pruritus.

Statistical analysis was performed using the Students' Unpaired T-test.

Results

The 45 patients receiving epidural morphine experienced good analgesia with 67 per cent complaining of pruritus, 64 per cent in the prophylactic group and 75 per cent in the PRN group. However, this difference was not significant ($p < .05$). The mean time to onset of itching was two hours and 12 minutes in each group.

Figure 1 illustrates a significantly shorter duration of pruritus in the prophylactic group of 14.4±1.21 hours as compared to 20.4±1.79 hours in the PRN group. There was no significant difference in the intensity of pruritus found in the two groups, and the mean score measuring this intensity was 3.3/10 for the combined groups. The 10 patients in the control group did not complain of itching.

Figure 2 compares patients with a history of drug allergy or chronic allergic rhinitis to those without such a history. Twenty-three per cent of the patients who complained of itching had such a history of allergy, which was not significantly different from the 27 per cent with a history of allergy who did not experience itching.

There was no significant difference in the incidence of nausea and/or vomiting experienced by the two groups. Eleven per cent of all patients had nausea and/or vomiting, 12 per cent from the prophylactic group and 8.3 per cent from the PRN group. No patients experienced subjective shortness of breath or

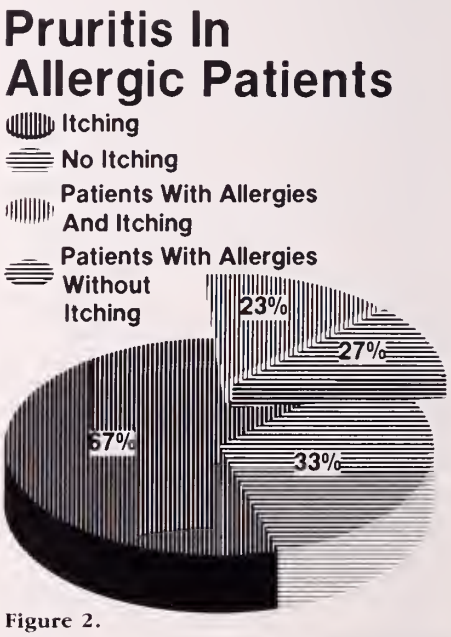

Figure 2.

respiratory arrest. One patient in the PRN group had a decreased respiratory rate to eight breaths per minute which resolved with naloxone administration. Realizing the potential for side-effects, 44 of the 45 patients said they would choose to have epidural morphine again.

Discussion

The administration of naloxone prophylactically in an intravenous drip is more convenient for nursing personnel, and avoids delay in administration of the drug, as on a PRN basis. Less than half of the total PRN dose of naloxone is needed to cover the patient for 24 hours. Taking into account the cost of additional drug and the PRN administration fee, $174 potentially could be saved on each patient at our institution.

Pruritus secondary to epidural morphine does not appear to be related to a history of allergy. This would seem to be consistent with the unresponsiveness of pruritus to antihistamines.

Patients treated prophylactically with naloxone experienced a shorter duration of itching than those treated on a PRN basis. Maintaining a steady state naloxone blood level by continuous intravenous infusion may play some role. Frequency of nausea and/or vomiting and intensity of pruritus appear unaffected by these different methods of administration.

In conclusion, prophylactic administration of naloxone by continuous intravenous infusion has been shown to be effective for the treatment of pruritus secondary to epidural morphine administration. Relief from itching was comparable in both groups of patients, with those in the prophylactic group enjoying a significantly shorter duration of itching. In addition, this method is apparently equally safe and, certainly, more economical than the PRN approach.

"Realizing the potential for side-effects, 44 of the 45 patients said they would choose to have epidural morphine again."

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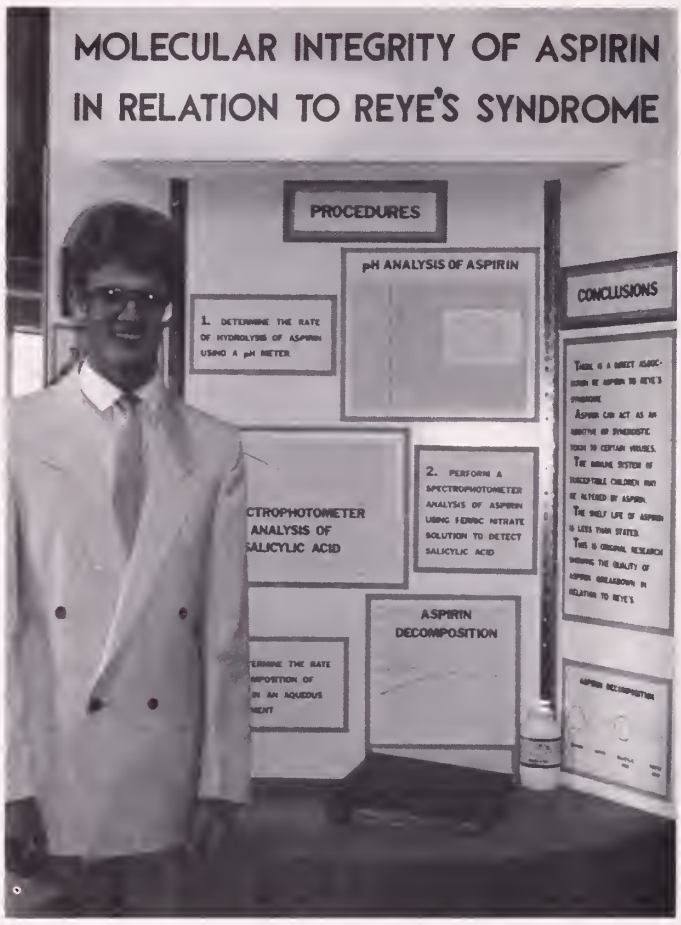
Molecular Integrity Of Aspirin In Relation

SCOTT CAVENEY
Wheeling, West Virginia

Aspirin decomposes into salicylic acid and acetic acid, neither of which has any pain-relieving or temperature-reducing characteristics. Preliminary analysis of pure aspirin using a pH meter suggested a breakdown much faster than published values and the stated shelf life would indicate. The resulting data also suggested a rate order conflicting with the published zero order rate. Further analysis of aspirin with a spectrophotometer, utilizing a range of temperature and time conditions, reinforced the hydrolysis data.

Reye's syndrome is an acute, life-threatening disease affecting children from infancy to late teen years, and is one of the 10 major causes of death in children. It is characterized by vomiting and delirium following the apparent recovery from a prodromal illness, primarily influenza or chickenpox. The illness progresses to cerebral edema and coma.

Case/control studies showed that between 96 per cent and 100 per cent of the cases and between 44 per cent and 71 per cent of controls received salicylates during a viral respiratory illness or bout with chickenpox; however, nowhere in the literature is the quality of the ingested aspirin discussed. The immune system of susceptible children may be altered by aspirin which may act as an additive or synergistic toxin in relation to certain viruses.



Scott Caveney of Wheeling, now a West Virginia University student, in front of his research exhibit which won first place in the West Virginia Science Talent Search (Westinghouse Research Award) and four other first-place awards and a grand prize in other science fair competition (date of photo April, 1987, age 17).

Introduction

Acetylsalicylic acid, commonly known as aspirin, was introduced in 1899 and is used worldwide to relieve pain, fever, and inflammation. Aspirin hydrolyzes into salicylate and acetate in an aqueous environment (1). In light of the widespread use of this drug in such areas as arthritis, heart disease, dental discomfort, and headache relief, knowledge of the hydrolysis rate may provide valuable information as to the stability of aspirin in relation to the shelf life of this pharmaceutical product.

Data presented in this investigation showed a breakdown of aspirin faster than previously reported (2). As a result, people dependent on aspirin may be taking into their systems a large influx of salicylic acid and acetic acid. The full implications of this influx are not presently known; however, a correlation between Reye's syndrome cases and the ingestion of aspirin during prodromal disease has been reported (3).

Reye's syndrome, first diagnosed in 1963 (4), is an acute, life-threatening disease affecting children from infancy to late teen years, and is one of the 10 major causes of death in children. Although Reye's syndrome primarily attacks children, it is not confined to any age group. In fact, cases have been reported in people over 50 (5). It is characterized by vomiting, delirium, aggressiveness, and irrational behavior following apparent recovery from a febrile illness, primarily influenza or chickenpox (6). The peak season for Reye's syndrome is in January, February, and March, coinciding with increases in influenza and chickenpox cases.

Unfortunately, most parents are not fully aware of the possible association of salicylates and Reye's syndrome (7). The purpose of this project is to investigate the relationship between aspirin purity and the incidence of Reye's syndrome.

Materials and Methods

Preliminary determination of the rate of aspirin hydrolysis was done using an Orion® pH meter, a strip chart recorder, pharmaceutical-grade aspirin, and triply distilled water. Each test was recorded on the strip

To Reye's Syndrome

Editor's Note:

"Originality is simply a fresh pair of eyes."
—Woodrow Wilson

It is unusual for the *Journal* to publish a paper from such a source. Scott Caveney did this research on aspirin as a senior in high school at Linsly in Wheeling. This paper won first place in the West Virginia Science Talent Search sponsored by Westinghouse and the West Virginia Academy of Science.

Dr. Otis Bowen, Secretary of Health and Human Services, gave Scott an award of merit for "creativity, concern and commitment in developing a science project which may have direct benefit in health programs affecting young people."

Scott is currently a freshman at West Virginia University studying pre-medicine on a full four-year WVU Foundation scholarship.

chart recorder, which also acted as a time base for each test.

One tenth gram of powdered aspirin was dissolved in 100 ml of distilled water. Simultaneously, the electrode from the pH meter was placed into the solution and the strip chart recorder and magnetic stirrer were turned on. The pH readings were recorded every 24 seconds, and data collection was terminated following a consistently low pH level. Data from the plotted graph were analyzed using linear regression to obtain a mathematical model of the event. A second similar investigation into the hydrolysis of aspirin involved the addition of 1.0 g of aspirin in 100 ml water.

To evaluate the accuracy of the hydrolysis rate, a 0.1 g sample of aspirin dissolved in 100 ml of water was boiled for five minutes. Boiling the sample assured driving the reaction to completion.

Anaylsis of aspirin hydrolysis by monitoring pH changes does not adequately show hydrolysis rates because resultant pH values represent the pH of salicylic acid, acetic acid, and any unhydrolyzed aspirin; therefore, it was necessary to determine what per cent of the hydrolyzed aspirin was salicylic acid. This was accomplished by using a four-per cent ferric nitrate solution. When salicylic acid comes in contact with ferric nitrate, various shades of purple are produced depending on the concentration of salicylic acid. As the aspirin hydrolyzes, the iron complex attaches to the salicylic acid, producing a purple color.

Using a Spec-20® spectrophotometer, accurate salicylic acid concentrations could be ascertained. To verify spectrophotometer analysis using the ferric nitrate solution, the stability of ferric nitrate in the presence of salicylic acid was checked. A color was developed with the salicylic acid and the ferric nitrate solution, and the per cent transmittance was monitored for several days. The test showed that the color reached a maximum intensity after approximately five minutes, maintained it for several hours, and then faded, making the per cent transmittance rise.

Before tests were done on aspirin, a concentration curve of pure salicylic acid was established (Figure 1). A stock solution of 1.0 g salicylic acid in one liter of ethyl alcohol solution was prepared. Serial dilutions were made by taking 10 ml, 15 ml, 20 ml, 25 ml, and 30 ml of the

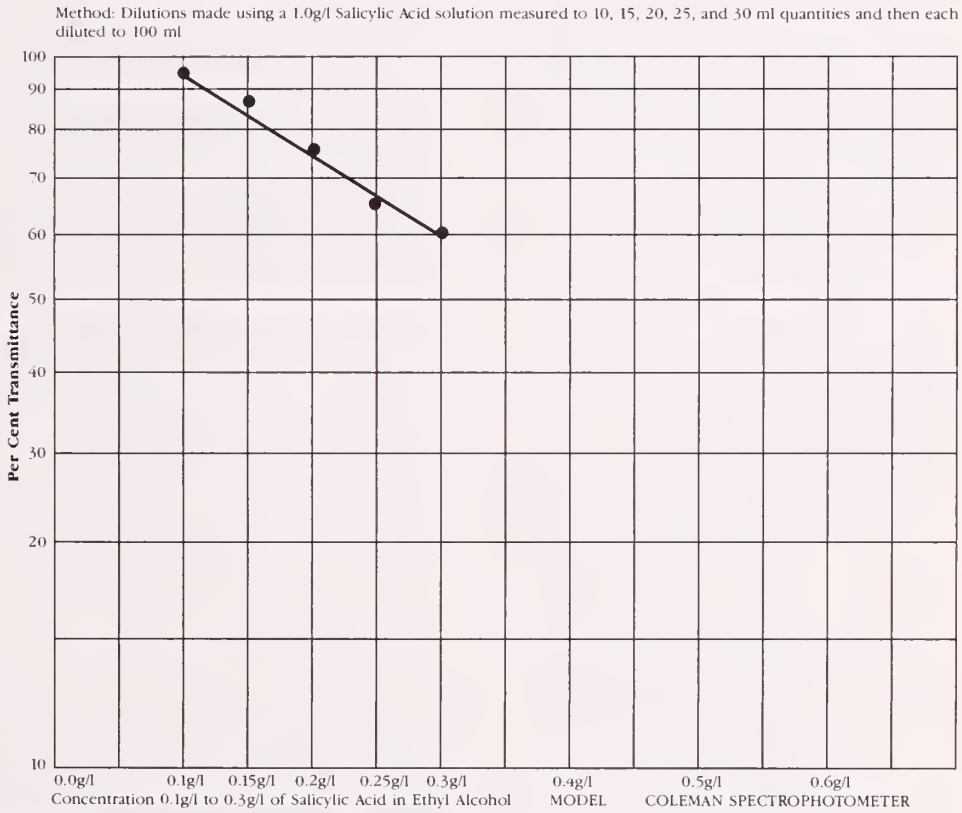


Figure 1. Spectrophotometer analysis of salicylic acid.

stock solution and diluting to a final volume of 100 ml. The spectrophotometer was blanked with the ferric nitrate solution. Five ml of a sample and 45 ml of the ferric nitrate solution were put in a volumetric flask, shaken thoroughly, and put in the spectrophotometer. The per cent transmittance was read five minutes from the time the color solution was added with results recorded on the graph. Based on the result of this graph, the following procedure was used to detect the amount of salicylic acid in a sample of aspirin:

Using the molecular masses of aspirin and salicylic acid, 180 g/mole and 134 g/mole, respectively, it was stoichiometrically determined that 0.040 g aspirin in 100 ml of distilled water would produce the best results for the graph. The spectrophotometer was blanked with the ferric nitrate solution. Five ml of the aspirin sample and 45 ml of ferric nitrate solution were combined, shaken thoroughly, and put in the spectrophotometer. The per cent transmittance was read and recorded exactly five minutes from the time the color solution was added. Using the salicylic acid concentration curve, the weight of salicylic acid in the solution was determined. The per cent decomposition was determined using the following equation:

$$\text{Per cent decomposition} = \frac{\text{X g/L Salicylic acid}}{\text{0.298 g/L Salicylic acid}} \times 100$$

Using this procedure, several conditions could be altered to determine more accurately the breakdown of aspirin in an aqueous environment. Three samples were used.

Sample #1: 0.040 g aspirin in 100 ml water, per cent transmittance was measured five minutes after it was put in water.

Sample #2: 0.040 g aspirin in 100 ml water, boiled for 15 minutes, cooled, refilled to 100 ml, then per cent transmittance measured.

Sample #3: 0.040 g aspirin in 100 ml water, boiled for 15 minutes, covered with a watch glass, boiled for an additional 15 minutes, cooled, refilled to 100 ml, then per cent transmittance measured.

Each sample was monitored for a period of four days and the results recorded (Figure 2).

The titration of aspirin was another procedure to be utilized. Using a pH meter, 0.452 g aspirin was titrated against 0.1 Molar NaOH.

Once an accelerated breakdown in pure aspirin was noted, brand-name aspirin samples were compared. Four samples of aspirin with varying dosages and expiration dates were used:

Sample #1: Schein® aspirin, no expiration date provided, 227 mg aspirin/tablet, four tablets used.

Sample #2: Anacin® aspirin, expiration date 9/84, 400 mg aspirin/tablet, three tablets used, packaged individually.

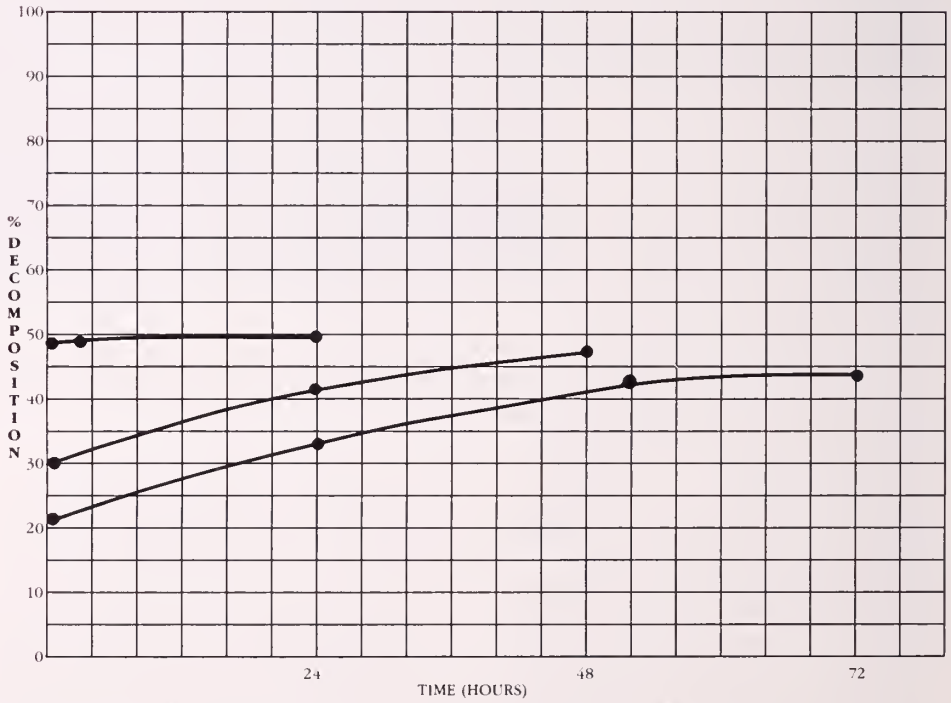
Sample #3: Anacin® aspirin, expiration date 12/88, 400 mg aspirin/tablet, three tablets used.

Sample #4: Empirin® compound #3, expiration date 6/26/81, 325 mg aspirin/tablet, three tablets used, also contained 30 mg codeine.

Due to variablility in aspirin dosages, a variable number of tablets was used to reach the weight of 1.0 g instead of crushing and weighing the tablets individually. Each sample was crushed, put in 250 ml of distilled water and monitored for four days.

Results

The graph of the pH analysis (Figure 3) suggested an order rate other than zero as proposed by many pharmaceutical houses. The zero order rate reaction would mean that concentration does not



Top Line—0.040g aspirin in 100ml water, boiled for 15 minutes, covered with a looking dish, boiled for an additional 15 minutes, cooled slightly, refilled to 100ml, and measured

Center Line—0.040g aspirin in 100ml water, boiled for 15 minutes, cooled, refilled to 100ml, and measured

Bottom Line—0.040g aspirin in 100ml water, % transmittance measured 5 minutes after put in water

Each sample was measured on a daily basis.

Figure 2. Aspirin Decomposition.

affect the curve. Linear regression analysis gave an equation for the line to be $y = 4.690X - 0.082$ with a correlation coefficient of 0.97236. with maximum hydrolysis within 200 seconds. The test using 1.0 g aspirin in 100 ml of water resulted in a hydrolysis rate that dropped much more quickly than the previous test, demonstrating that concentration had a significant effect on the graph, also suggesting an order rate other than zero. The sample boiled for five minutes had a resulting pH = 3.17, compared to the original sample of pH = 3.02.

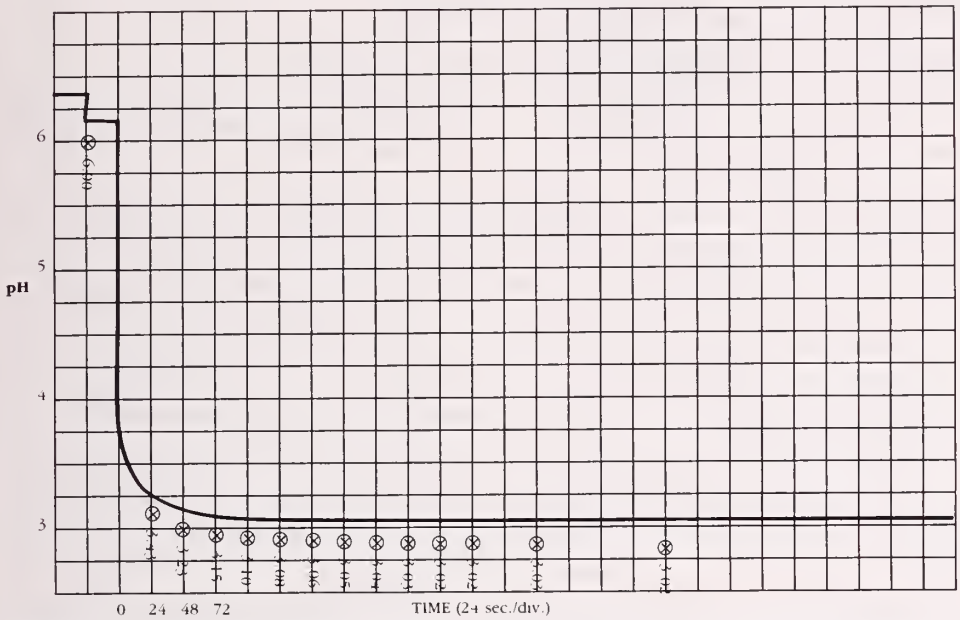


Figure 3. pH analysis of aspirin. This is a record of a pH test done with an Orion® pH meter with the graph recorded using a strip chart recorder. 0.1 grams of aspirin were placed in 100 ml. of distilled water and the graph was then started. The solution was agitated with a magnetic stirrer. pH points were recorded at time intervals determined on the graph paper. The reaction was run to completion with equilibrium occurring in 200 seconds. This procedure was repeated with the same results being obtained.

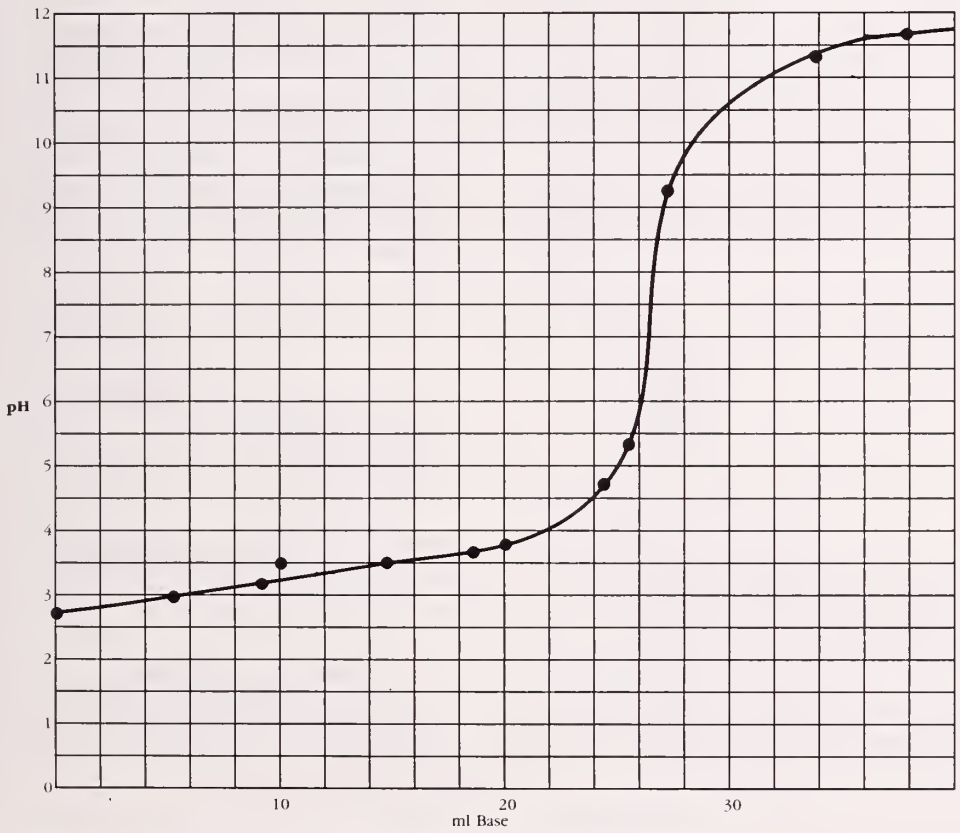


Figure 4. Titration curve of aspirin against NaOH using pH meter.

The spectrophotometric analysis of salicylic acid showed a linear relationship between per cent transmittance and concentration. From this, the grams per liter of salicylic acid in the aspirin samples were read and converted into per cent decomposition. The results were recorded on a daily basis (Figure 2).

Results from the aspirin titration showed that aspirin acted like a monoprotic acid, which produces a large break in the pH (Figure 4).

Results from the analysis on the various brands of aspirin showed that older aspirin had lower transmittance, thus indicating lower purity. Several important points were noted from this test. Older aspirin, when crushed and placed in solution, had large fragments of undissolved aspirin or "binder" on the top and bottom, making the solution cloudy. When crushing the tablets, the exterior of older aspirin was much softer than the new tablets. The spectrophotometer test also revealed that individually wrapped aspirin were not well protected, thus indicating hydrolysis had occurred inside the package, which is not vacuum sealed.

Discussion and Conclusions

The relationship between Reye's syndrome and prodromal illness has long been recognized, yet the exact cause of Reye's syndrome remains unknown despite many years of study (3).

Due to the high statistical association of salicylate ingestion with Reye's syndrome, it appears that there is a direct relationship between aspirin and Reye's syndrome. Symptoms of salicylate toxicity usually include nausea, disorientation, vomiting, dehydration, fever, oliguria, coma, and convulsions.

Unusual symptoms include bleeding, respiratory depression and pulmonary edema. Because of the similarities between salicylate toxicity and Reye's syndrome, it appears that, of the two aspirin components, salicylic acid seems to be the trigger mechanism for Reye's syndrome. The severity of the ill-ness depends on the quantity ingested and the weight of the patient, yet the condition can be potentially lethal (8).

Research on aspirin presented in this study shows that the shelf life is less than stated on the bottle. Aspirin cannot remain in a pure state for the stated two to five years when exposed to fluctuating levels of humidity.

Aspirin in a pure state, or impure state, can act as an additive or synergistic toxin to certain viruses such as influenza and chickenpox. The immune system of susceptible, unsensitized children may be altered by aspirin. This research showed the quality of aspirin in relation to Reye's syndrome.

Case studies of Reye's syndrome have failed to look at the quality of the aspirin ingested by the patient. Continuing needs exist for parental and public education and awareness regarding the risk of giving aspirin to children with influenza, chickenpox and other respiratory diseases. Increased awareness of the purity of drugs such as aspirin would also lessen the threat of diseases such as Reye's syndrome.

A cure for Reye's syndrome may be a long time in coming; however, an understanding of the causes of this disease is vital to lives in the future. Studies of Reye's syndrome in laboratory animals such as mice and puppies have proved relatively unsuccessful. This fact, unfortunately, confines studying Reye's syndrome to human patients, probably prolonging the amount of time until a cure can be found. The number of Reye's syndrome victims remains fairly constant, but, thanks to improved diagnostic and treatment procedures, the death rate has fallen to approximately 25 per cent in the last few years (9).

Acknowledgement

Special thanks to Garth Innocenti, Ph.D., my Linsly chemistry and physics teacher, science fair advisor, mentor, and friend.

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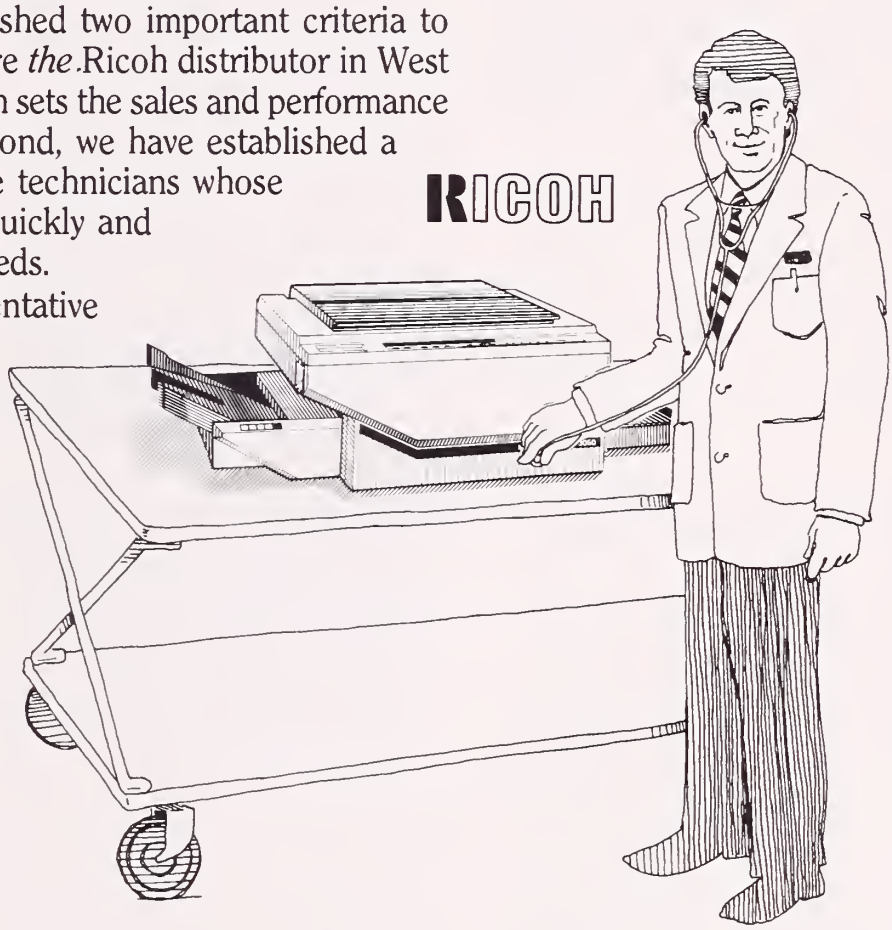

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President's Page

". . . we must work intensely and diligently to help the Friends of Medicine win elections."

A Time For Action

As we approach our version of Super Tuesday in West Virginia, many of our incumbent legislators are up for re-election, and many new faces are challenging them for the right to represent us. The questions we should ask ourselves are "Who do we rally around?," "Who would we like to see stay in office?" and "Who would we like to see replaced?"

The track records of the present and prospective public servants should be scrutinized and their platforms should be examined and judged. As physicians we should really know who are the friends of medicine.

Your counties and districts are where the action is. Go out and get to know the candidates. Meet them and talk to them and make them aware of the problems existing in our house of medicine today.

Those of us who have been involved in this process in the past know what it takes. It takes time, it takes money, and it most likely will take boldness to make public endorsements. We must get into the thick of it. This is the way politics is; it has always been this way and it is the way it is going to be.

I reiterate what I just recently said in previous President's Pages. "Medicine by its very nature of how if affects the American people is implicitly political." Looming just over the horizon are many controversial issues that will impact our practices. Most of these issues are governmental in nature and will cause considerable divisiveness in the ranks. A time for activism, unity and solidarity must surface amongst the membership.

Our lawmakers must be reached and informed of our views. We should solicit their support and, in turn, we must work intensely and diligently to help the Friends of Medicine win elections.

—Cordell A. De La Pena, M.D.

Quo Vadis?

An editorial published in the *New England Journal of Medicine,* August 27, 1987, entitled "Why Are Todays Students Choosing High Technology Specialties Over Internal Medicine?," presents a provocative and timely question. The answers are fairly obvious and the response predictable.

Internists, the diagnosticians of the past, used to be referred to as doctors who "know everything and do nothing" in contrast to other specialists. These disciples of Sir William Osler have been held in high regard. Internists no longer enjoy that level of prestige among peers, or self respect, professional fulfillment, patient approval, control of their destinies, or capability to budget time effectively. Nor do they rate a compensatory increase in financial remuneration.

On "Black Tuesday," March 17, 1987, the results of the national internship matching program were announced. This disclosed that top students no longer consider the specialty of internal medicine, in particular, and primary care medicine (family practice and pediatrics) in general, most desirable. This past year technical subspecialties attracted a high percentage of the best students. Cognitive activities such as talking to, listening to, examining and thinking about patients is the most difficult part of medicine and the least finanically rewarding. This represents hard physical, mental and emotional work.

Current constraints from many levels—government control, peer review, greedy professionals (in and out of medicine), liability insurance rates, the Medicare freeze, and a litigious society compound these difficulties. In spite of pleas for acceptance of increased compensation for cognitive services, the disparity between payment for these versus procedural and technical skills increases.

Young physicians now more than ever before want a family life, guaranteed time off, professional fulfillment and a reasonably comfortable life style. Primary care physicians, except those in cloistered settings or large groups, find these goals unobtainable. The young are telling us it is time to take a long, hard look at the discrimination against front-line physicians.—JMH

Reflections On The Health Care Quality Improvement Act

As is often the case, government frequently announces with great fanfare the arrival of certain programs which ultimately prove nothing and go nowhere. Likewise, government has been known to introduce programs with no fanfare which have had far-reaching impact upon its citizens. So it may well be with the Health Care Quality Improvement Act of 1986.

This little-trumpeted act with the lofty-sounding title promises to impact medicine as much as any call for national health insurance or revision of physician payment mechanisms. While it accomplishes some good and needed things, it also has the potential for much harm and physician anguish unless it is modified soon.

Because of the PATRICK case dealing with antitrust implications of the peer review process, Congress developed a law to protect peer review from antitrust discoverability. The good part of the bill creates a tight mechanism to protect physicians against antitrust violations in peer review as long as the review is done according to the prescribed outline of procedures.

The ominous second part of the bill centers on the reporting mechanisms put into place. A federal clearinghouse is to receive data on physicians from all state licensing boards which take any actions against licensees. Such action is to include changes in privileges, including the lowering or reduction of privileges for any period of more than 30 days, any refusal of admission to staff or removal from staff.

HMOs, PPOs and PROs and licensing boards are to report any actions concerning quality of care. Most striking of all, however, is the fact that the law requires the reporting of each and every professional liability settlement, in or out of court, regardless of the amount.

Fortunately, the reporting mechanism has not yet gone into effect because Congress failed to fund the startup of the data bank. In all likelihood, the funding will be provided in the 1988-89 fiscal budget with the result that the data bank will become reality sometime in the next year.

So what's the problem? Aren't we for policing of the bad apples and ferreting out the unqualified in the ranks? Without a doubt, competent physicians everywhere want nothing more than to accomplish

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these ends. But as is often the case, legislation results in overkill and creates a whole additional set of problems.

Immediately, questions of access to the collected data arise. The law requires hospitals to access the data when physicians make initial application for staff privileges and to recheck at least once every two years thereafter on each staff physician. Failure to do so would result in presumption that the hospital had knowledge of the information without access in the event of future adverse proceedings involving a medical staff member. And such a presumption would mean liability for the hospital conjointly with a physician named in a professional liability action.

The law also gives licensing boards, medical organizations like WVSMA or the county society, and the individual physician access to the data. As a result, routine appointment or reappointment to a hospital staff or even to membership in an organization will become a thing of the past.

As first written the law would have permitted any member of the public including reporters and plaintiffs attorneys to have access to the information, but that loophole was closed by further Congressional action.

While it is certainly appropriate to mandate reporting of privilege loss associated with poor quality health care delivery, is it really necessary to report a voluntary reduction in staff privileges by a physician who simply elects to no longer practice obstetrics or who eliminates a particular surgical procedure from his list of privileges? We think not, but government representatives already are interpreting the law to mean ANY change in privileges must be reported.

While affording peer review protection to physicians serving on appropriate committees, the law does nothing to protect the confidentiality of the physician who may report a quality concern to the medical staff. Nor does the law provide protection to the staff should it conduct any reviews relating to health providers other than physicians. That is, should the committee attempt to review podiatrists, oral surgeons, psychologists, physical therapists or other allied health personnel, it does not enjoy the protection of the act. How then is the medical staff really supposed to take responsibility for the overall quality of the health care delivered in a given institution? Once again we see clear evidence of government choosing to single out further one segment of society and the economy—physicians—for punitive actions.

The law also provides for a "user fee" to be assessed upon those using the data bank. This is no problem insofar as the fee is reasonably based upon costs of data retrieval and operating the system. What will prevent it from becoming an open revenue source for other activities by whatever entity finally wins the contract to maintain the system? And how do we know that the cost will not be passed along to the physician applying for staff privileges in the form of an exorbitant application fee?

But perhaps the greatest concern of all as pointed out by Gary F. Krieger, M.D., President of the Los Angeles County Medical Association (LACMA) in a recent President's Report in *LACMA Physician,* is the professional liability reporting requirement. As Doctor Krieger says it, "Reporting every settlement no matter how small will make physicians reluctant to settle anything even though most professional liability cases are found to have no merit (81 per cent in California). Therefore, the so-called nuisance cases will end up in court and the net result of all this could well be substantial increases in professional liability premiums.

He notes that in California only settlements in excess of $30,000 are currently reported, but that when the data bank becomes operational that law becomes null and void and the State Medical Board becomes "the agency funneling data to the feds on a periodic basis."

All state and national medical organizations ought to be working for further modification in this law while there is still time to make such needed changes in loopholes and objectionable passages. California Medical Association's legal counsel is already exploring such action.

As Doctor Krieger concludes (and we echo): "This law is another example of government rushing into something without thinking about the long-term implications of their actions. It is indeed appropriate to have federal antitrust protections for physicians involved in peer review proceedings. I have no problems with a data bank that reports substandard care by physicians. But I do have concerns about a law which can snag honorable and first-rate physicians—practicing high-quality medicine—into situations which could cost them endless hours of anguish and exorbitant sums of money merely to clear their names."

Are West Virginia physicians willing to work on improving this legislative problem?—MGS

Our Readers Speak

Physician Lobbyist Needed

The 1988 legislative session was not a productive one for the initiatives of the State Medical Association. One could argue that 1988 was not a productive legislative year for anyone. There was one shining example of a health-related issue which has had difficulty in past years and passed both houses this year. This issue was the seat belt bill [since vetoed by Governor Moore]. The passage of this bill in a particularly difficult legislative year was due in large part, I believe, to the daily presence of Nancy Kessel who was working essentially as a single-issue lobbyist on this particular legislation. Nancy also had the able assistance of a number of auxilians and physicians who were interested in the subject. The major factor, however, I believe, was Nancy's daily presence at the Capitol and easy availability to talk to the legislators and the credibility which she brought to the issue.

This points up a glaring deficiency in our own strategy as an Association, and that is the lack of a full-time physician at the Legislature. Dr. David Morgan had served in this capacity for the past several years in a very admirable fashion. Professional and personal circumstances, however, made it impossible for Doctor Morgan to continue as our full-time physician at the statehouse this year.

In November of last year, the State Medical Association Executive Committee approached me through Mr. Scholten about the possibility of taking on this responsibility. After a great deal of thought and discussion with my family and partners, I came to the decision that I simply do not have the time necessary to give to such an endeavor. It simply is not possible to be away from a surgical specialty practice for a two-month block period of time and still have a practice there when one returns. I did, however, tell the Association that I would be available on a voluntary basis as I had been in the past. Unpredictable demographic changes in my specialty in the Charleston area occurring just prior to and during the legislative session placed my time at even more of a premium, and I was not able to give the time which I had been able to give in past years.

I say this for two reasons—first of all to apologize for the fact that I was unable personally to spend more time at the Legislature this year, but secondly, and more importantly, to emphasize that we do indeed need at least one physician who can devote the months of January and February to the legislative process. Ideally, we really need a physician who is able not only to give the months of January and February but also to be in attendance at interim sessions on a monthly basis throughout the year. I suppose the ultimate situation would be if we had one physician who could devote his full energies to each initiative on our agenda such as Nancy Kessel was able to devote her full energies to the seat belt initiative this past year.

Surely there must be those of you in the retired or semi-retired ranks of West Virginia physicians who would be able to give of your time and expertise for this very important cause.

I do not mean to imply by the tone of this letter that we are not well served by the professionals in the State Medical Association office. Mrs. Crabtree has served us especially well in tracking legislation and keeping us aware of pending legislation. She and Tony Shepherd have served us very credibly as lobbyists for our issues. There is, however, a certain credibility which is lacking when the State Medical Association sends professional lobbyists to talk about our initiatives but does not have a member of the Association to back them up.

F. Thomas Sporck, M.D.
1314 Virginia St., East
P.O. Box 1628
Charleston, WV 25326-1628

WVSMA Contribution Helps

My sincere thanks . . . for the West Virginia State Medical Association's check for $150 to The University of Charleston — "Women Alive!" Program. Your contribution covered the expenses of Dr. Mary Ann Woodring. She gave a most inspirational address concerning her winning of the Iron Man Triathalon in Hawaii in 1987. As you know from clippings sent to you with a request for funding, Doctor Woodring is a practicing physician, mother of eight children and a woman who had a mastectomy nine months before the Triathalon victory. Her talk was inspiritional and, on behalf of the "Women Alive!" Committee, I want to thank the West Virginia State Medical Association for their interest and support.

Claire W. Foster
Director of Development
and Special Giving

Cardiovascular Surgery At WVU Convention Subject

"Cardiovascular Surgery at West Virginia University in 1988" will be the title of a paper to be presented by Dr. Gordon F. Murray of Morgantown during WVSMA's 121st Annual Meeting in August.

Doctor Murray, Professor and Chairman, WVU Department of Surgery, will speak during the third general scientific session Saturday morning, August 20.

The Annual Meeting is scheduled August 16-21 in White Sulphur Springs at the Greenbrier.

Doctor Murray came to WVU in 1985 from a teaching post at the University of North Carolina at Chapel Hill. He is Cardiothoracic Surgeon-in-Charge at WVU Hospitals, Inc. At WVU he also is Chairman of the Professional Fees Committee, Department of Surgery, and a member of the Coordinating Committee for Graduate Medical Education.

Thoracic Surgery Activities

Doctor Murray is American Association for Thoracic Surgery representative to the Coordinating Committee for Continuing Education in Thoracic Surgery, Secretary-Treasurer of the Southern Thoracic Surgical Association, Secretary-Treasurer of the Thoracic Surgery Directors Association, and was 1985 Chairman of the Postgraduation Course for Continuing Education, Society of Thoracic Surgeons.

Born in Muskegon, Michigan, he received his M.D. degree in 1963 from the University of Michigan. He served his internship and residency at Johns Hopkins Hospital where he was Chief Resident in 1969-70.

Doctor Murray is Editor of the book, *Cancer of the Lung* (1974), and author or co-author of five book chapters. He also is the author or co-author of some 70 articles and 22 abstracts.

Gordon F. Murray, M.D.

Announced Previously

Speakers and topics announced previously are:

Thursday Morning, August 18—"The Psychosocial Management of the AIDS Patient and Family," Jeffery C. Hutzler, M.D., Program Director of the Outpatient Clinic at the Cleveland Clinic Foundation;

Friday Morning, August 19—"A Defense Attorney's Perspective on Medical Liability," James L. Griffith, J.D., Griffith & Burr, P.C., Philadelphia; and "Sensible Practice of Medicine in a Technologically Oriented Society—Some Call This Ethics," Eugene A. Stead, Jr., M.D., Florence McAlister Professor (Emeritus) of Medicine and Chairman, Department of Medicine, Duke University.

Other topics scheduled include mandatory assignment and rising health care costs (Thursday morning), controversial procedures (Friday morning), and endoscopic therapy of biliary and pancreatic disease (Saturday morning).

Convention Schedule

Convention activities will begin with a meeting of the Executive Committee Tuesday afternoon, August 16. Council will meet Wednesday morning; Thursday afternoon will be set aside for recreation and golf and tennis tournaments, and meetings of WVSMA sections and specialty societies will be held Friday afternoon.

A luncheon is scheduled Saturday for past presidents of WVSMA, visiting neighboring state presidents and West Virginia 50-year graduate physicians.

The second and final house session will be held Saturday afternoon. As announced earlier, the delegates will be addressed by Dr. James E. Davis of Durham, North Carolina, who will be installed as AMA President in June.

A cocktail party for WVU and Medical College of Virginia Alumni and exhibitors will be held during the convention, and a reception honoring outgoing and incoming Association and Auxiliary officers is planned Saturday evening. No specific entertainment event is being planned for Friday evening this year.

Resolutions Deadline

All resolutions prepared for presentation in the WVSMA House of Delegates must be sent to Executive Director Merwyn G. Scholten at least two weeks before the opening of the Annual Meeting. The deadline for submitting resolutions is August 2.

If submitted later, unanimous consent of the House is required for representation.

Program Committee

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

Additional convention speakers, topics and plans will appear in upcoming issues of *The Journal*.

Doctor Stevenson Interim WVU Dean

James M. Stevenson, M.D., has been named Interim Dean of the West Virginia University School of Medicine. Doctor Stevenson is currently Chair of the School's Department of Behavioral Medicine and Psychiatry and Medical Director of the Chestnut Ridge Hospital in Morgantown.

Doctor Stevenson's appointment becomes effective in July, when Dean Richard DeVaul, M.D., leaves to become Associate Provost and Dean of the Texas A&M University School of Medicine.

In announcing Doctor Stevenson's appointment, John Jones, M.D., Vice President for Health Sciences, said, "We are fortunate to have an administrator of Doctor Stevenson's outstanding ability and experience available to fill this very important position. He works extraordinarily well with our faculty members, and will provide the quality of leadership the School of Medicine requires.

"Doctor Stevenson is highly respected in his field. He is well known in West Virginia, and he knows the state well."

Doctor Stevenson was born in Charleston, graduated from Ravenswood High School, earned his bachelor's degree from Marshall University, and earned his M.D. and completed his residency in psychiatry at WVU.

"I'm worried. My financial advisor is one of my patients and he can't pay his bills."

On Faculty Since 1973

He has been on the WVU faculty since 1973. From 1974 to 1978 he was Director of the Charleston Division of the Department of Behavioral Medicine and Psychiatry.

From 1979 until the present he has been Chair and Professor of the Department of Behavioral Medicine in the WVU School of Medicine in Morgantown.

"It's an exciting time to be working with the School of Medicine. A lot of hard work has been done in the recent past, and many programs are coming to fruition just now. I'll be trying to keep things on track and keeping my eyes open for new opportunities," Doctor Stevenson said.

He said the presence of many "talented and energetic" faculty and residents on the staff of Chestnut Ridge Hospital makes it possible for him to turn his attention to the needs of the School of Medicine.

Since the 70-bed hospital opened last November, inpatients treated by the Department of Medicine and Psychiatry have increased by 50 per cent, with patients coming from throughout the state.

The hospital's board of directors has just decided to add a third floor to the facility, and construction is likely to start in about a year.

A search committee for Dean of the School of Medicine has been formed. William Neal, M.D., Professor and Chair of the Department of Pediatrics, will chair the committee.

Poetry Corner

Pacific

Yonder lies the wide Pacific
Glistening blue beneath the sun;
Calm, majestic, almost mystic;
Bidding, urging us to come.

White waves breaking on the beaches,
Seagulls lazing in the sky,
Pleading, begging, now beseech us;
"Come at once," the breezes sigh.

Seashells lying in the white sand
Just for us; for you and me.
A distant lighthouse on an island
Warning ships far out at sea.

Sea Air blowing gentle breezes
Puts to flight our daily care;
Softly lulls us, soothes and pleases,
Gives us rest and comfort rare.

E. Leon Linger, M.D.
Buckhannon

Alyssa

Little round head on a neck so weak
That she bobs and weaves like a fighter
Big blue eyes that constantly seek
A finger to hold to tighter
Little crooked grin she flashes about
She's so full of fun—a winner no doubt
A pretty baby girl
She's so fresh and so new
It's so easy to love her
Both grandads do
Ten little fingers and ten little toes
It hurts like the dickens
When she pulls on your nose
The wisdom of ages lies deep in her eyes
All the things that she knows
Could be quite a surprise

J. Paul Aliff, M.D.
Teays (Putnam County)

We request physician contributions to Poetry Corner.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Interim Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University

May 6-7, Orthopedic Reunion Days

May 14, Symposium on Sleep Disorders

June 3-4, Anesthesia Update '88

CAMC/West Virginia University, Charleston Division

May 5-6, Angioplasty Demonstration Course

May 20, Sexuality in the Spinal Cord Patient

June 4, Interventional Radiology

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—May 26, ENT Update, Ronald L. Wilkinson, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—May 26, Evaluation of Peripheral Vascular Disease, Donald McDowell, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—May 12, Color Flow Doppler, Ganpat G. Thakker, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—May 18, Update on Antibiotic Use in Patients & Out Patients, Melanie Fisher, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—May 3, Syncope, John F. Brick, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—May 4, Pediatric Emergencies, Pediatric Emergency Team, Kanawha Valley Children's Hospital

Hurricane, • Putnam General Hospital, 9:15 A.M.—June 16, COPD, Mahendra Patel, M.D.

Logan, • General Hospital, 11:30 A.M.—June 17, Update on Hodgkins Disease, Steven Jubelirer, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—May 10, New Treatment of Cardiac Diseases, Harold Selinger, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—May 17, Emergency Room Orthopaedic Management (to be confirmed)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—May 5, Doppler Ultrasound in Assessment of Heart Disease, Abnash Jain,, M.D.

Montgomery, • General Hospital, 12 P.M.—May 4, Trauma Services, James Kessel, M.D.

June 1, Allergy Update, Chandra Kumar, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—May 12, Inflammatory Bowel Disease, Ronald Gaskins, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—May 24, New Medications for Acute MI, Harold Selinger, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—May 13, Ultrasound Update, Mary McJunkin, M.D.

June 10, AIDS, Terrie Lee, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—May 26, Oncology Update/Breast, Steven Jubelirer, M.D.

June 23 (program tba)

Spencer, • Roane General Hospital, 12:30 P.M.—May 19, Rheumatology, Mark Phillips, M.D.

June 21, Alcohol & Drug Abuse, Patricia Treharne, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—May 3, A Neonatologist Talks About the Sick Newborn, Ellen G. Szego, M.D.

Waynesburg, PA, ★ Green County Memorial Hospital, 7 P.M.—May 10, Surgical Topics: Head & Neck Thyroid/Parathyroid, Thomas Covey, M.D.

May 24, Assessment of Thoracic & Abdominal Injuries, Ronald C. Hill, M.D.

Welch, ☐ Welch Public Library, 12 P.M.— May 18, Workup of Headaches (speaker tba).

Weston, ★ Stonewall Jackson Hospital, 6 P.M.—May 9, Usage & Advantages of Hyperalimentation: Criteria for Evaluating Usage.

Wheeling, ★ Ohio Valley Medical Center 8 P.M.—May 11, Drug-Induced Pulmonary Disease: A Disease of Medical Progress, Marcus Kung, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—May 25, Management of Chronic Pain, J. K. Lilly, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library 4 P.M.—May 17, Early Diagnosis of Breast Cancer, William L. Higgins, M.D.

Williamson, ☐Memorial Hospital Cafeteria, 6:30 P.M.— May 5, Diverticulosis, William O. McMillan, Jr., M.D.

Doctor Leckie Gets 'Mister Doc' Award

Jack Leckie, M.D.

Dr. Jack Leckie, a Huntington family physician since 1951, has received the highest possible recognition by the West Virginia Academy of Family Physicians.

Doctor Leckie received the 1988 Mister Doc Award at the group's 36th Annual Scientific Assembly held in Huntington at the Radisson Hotel.

This recognition is based on the Appalachian custom of honoring a respected physician by adding the word "Mister" in front of the title doctor. It is because of this mountain tradition that the WVAAFP has chosen the term to honor each year a physician who has in a very special way earned the respect of his or her patients and colleagues.

Doctor Leckie was WVSMA President in 1975-76 and is Chairman of the Association's Insurance Committee and a former AMA delegate.

A graduate of Marshall University and George Washington University School of Medicine, he completed his medical internship at the U.S. Marine Hospital, New Orleans.

During World War II, Doctor Leckie saw active duty in the European Theater of Operations. As a line officer with the U.S. Navy Amphibious Force, he was accorded a spot promotion immediately prior to the invasion of Normandy. He was discharged with the rank of lieutenant commander.

While serving as President of the Cabell County Medical Society in 1965, Doctor Leckie was instrumental in launching a community Sabin vaccination program.

In 1966, he organized West Virginia's first full-time emergency department at St. Mary's Hospital in Huntington.

Doctor Leckie has served as President of the WVAAFP, and is a member of the Norval Carter Society.

Correction

The following physicians inadvertently were omitted from the list of 1987 WESPAC members in the March issue of the *Journal,* Pages 98-99: Ahmad M. Maraikayer, M.D., Warren Point, M.D., and N. T. Shanmugham, M.D., all of Kanawha County.

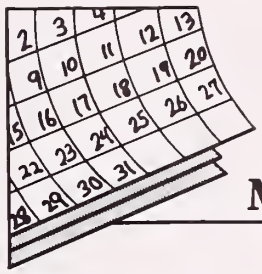
The following physicians' names should have been marked with an asterisk to denote sustaining membership ($100 contribution or more): Bill M. Atkinson, M.D., Parkersburg Academy; Derrick L. Latos, M.D., Ohio, and James T. Spencer, M.D., Kanawha.

Note: Plans are under way to publish the names of new 1988 WESPAC members monthly in order to reduce reporting errors. WESPAC contributions are made both directly to WESPAC and through AMPAC. Some contributors make a regular donation of $50 initially and later contribute an additional $50, then making them sustainers. The *Journal,* of course, will make every effort to report WESPAC giving as accurately as possible.—*Ed.*

1987 OBRA Data

A volume summarizing the extensive provisions of Omnibus Budget Reconciliation Act-1987 that impact upon physicians has just been published by AMA.

Copies of the spiral-bound publication are $17 each for AMA members and medical societies and $20 for all others. If you wish to make payment by VISA or Mastercharge, call the toll-free AMA number, 1-800-621-8335. For fast handling of other orders, call or write Irene Foster, AMA's Department of Radio, TV & Motion Pictures (phone number 312-645-5102).



Medical Meetings

May

1-5—Am. Assoc. of Pathologists. Las Vegas.

1-5—Am. College of Obstetricians & Gynecologists, Boston.

2—Am. Pediatric Society, Washington, D.C.

4-7—WV Chapter, Am. College of Surgeons, White Sulphur Springs.

11—CNA Second Generation Loss Control Seminar, Parkersburg.

27-30—WV Academy of Otolaryngology, Head & Neck Surgery, White Sulphur Springs.

June

3-7—Am. Urological Assoc., Boston.

7-10—Am. Cancer Society, Cleveland.

11-14—Am. Diabetes Assoc., New Orleans.

22—CNA Second Generation Loss Control Seminar, Huntington.

25—CNA First Generation Loss Control Seminar, Charleston.

26-30—Annual Meeting, AMA House of Delegates, Chicago.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

10—CNA First Generation Loss Control Seminar, Huntington.

21—CNA Second Generation Loss Control Seminar, Wheeling.

23-30—Am. College of Radiology, Cincinnati.

25-28—Society of Thoracic Surgeons, New Orleans.

25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.

October

3-6—AAFP, New Orleans.

8-12—Am. Academy of Ophthalmology, Las Vegas.

8-12—Am. Society of Anesthesiologists, San Francisco.

12—CNA Second Generation Loss Control Seminar, Beckley.

13-16—Am. Society of Internal Medicine, Atlanta.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

WVU Medical Center News

West Virginia University

Compiled from material furnished by the Medical Center News Service, Morgantown, W. VA.

Director Of New Institute Named

Mario Battigelli, M.D., one of the country's leading specialists in occupational medicine, has been appointed Director of the new Institute of Occupational Health and Safety at WVU.

Creation of the institute in WVU's School of Medicine was announced in early March by Gov. Arch A. Moore, Jr. The institute will bring a wide range of university expertise to bear on the hazards of the workplace and should help to make the state a safer, healthier place to work.

"Doctor Battigelli has a reputation as one of the outstanding researchers and administrators in his field," said John Jones, M.D., WVU Vice President for Health Sciences. "That fact that a new institute has been able to attract someone of his stature as its first director bodes very well for its prospects.

"It also indicates that Doctor Battigelli sees great promise in the institute. Our region—West Virginia and the surrounding area—has a concentration of manufacturing and resource extraction industries with high risks for worker exposure to health hazards. And in fact this state has a very high rate of work-related injury, disability and fatality.

"So the institute is a response to a real need, and it will be in a position to make important contributions to the health of our state's workers."

Doctor Battigelli joined WVU on April 1.

Born In Italy

He was born in Florence, Italy, and received his medical degree from the University of Milan. He has been a U.S. citizen since 1964. A specialist in occupation-related

Mario Battigelli, M.D.

diseases of the lung, he previously has been on the medical faculties at Duke University, the University of North Carolina at Chapel Hill, and the University of Pittsburgh.

Most recently, he has been Director of the Rocky Mountain Center for Occupational and Environmental Health at the University of Utah.

Since 1968 he has served as Editor of the *Journal of Environmental Science and Health.* He brings 35 years' experience in medicine, research, teaching and administration to his new position at WVU.

The institute will place a strong emphasis on outreach and service, and will be a vital link between WVU and industries throughout West Virginia. Its intent is to serve both labor and management in medical, technical, economic, environmental and legal areas.

Within WVU the institute will be the focus of a comprehensive, interdisciplinary approach to research, education and service.

"WVU already has strong programs that can support the goals of the institute," Doctor Jones said, citing the School of Medicine, College of Engineering, and the Institute of Labor Studies in the Cooperative Extension Service.

"The occupational hygiene program in engineering, for example, is concerned with clean air, worker health and fitness and other areas.

"The School of Medicine has internationally acclaimed researchers in pulmonary medicine, physical therapy, orthopedics and other fields relevant to the workplace. We have a strong toxicology program which can help us address health hazards involving toxic chemicals in the work environment."

In addition, the institute can turn for support to the Appalachian Laboratories for Occupational Safety and Health, a division of the National Institute for Occupational Safety and Health located adjacent to the Health Sciences Center campus.

Drawing on these extensive human and technical resources, Doctor Jones said, the institute will conduct research on health issues most relevant to the West Virginia industrial environment.

The institute also will coordinate training of occupational health professionals in a variety of disciplines for positions in industry, teaching and research. The School of Medicine plans to strengthen training in occupational medicine in its M.D., residency and continuing education programs.

Through continuing medical education, the institute will reach out not only to occupational medicine specialists but also to physicians throughout the state and region who see patients with occupational injuries and diseases, as well as to nurses, physical therapists, industrial hygienists and safety officers. "A healthy work environment is not a luxury. In addition to the toll in human suffering, hazards of the workplace have negative economic impacts," Doctor Jones said.

"The institute is poised to provide important resources in service, research and training, and it will be a key element in the total business climate of the state."

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MU School Of Medicine News

MARSHALL UNIVERSITY

MU Having Impact, Task Force Reports

More State Funding Urged

MU School of Medicine is having a powerful, positive impact on the health care of West Virginians. However, to fulfill its mission, the school needs to do more — and must find greater financial support in order to increase its services to the people of the state.

Those are the conclusions of a special task force created by Marshall's Institutional Board of Advisors to review the mission of the School of Medicine, examine the School's success in fulfilling its mission, and submit recommendations on how future needs might be met.

"The task force found that the School of Medicine has made enormous progress in meeting the health-care needs of West Virginians, particularly veterans and persons in rural areas, and that the School is the most effective means for meeting those needs," said A. Michael Perry, Chairman of the Board of Advisors.

"However, the report very forcefully makes the point that unless increased state funding is dedicated to the Marshall University School of Medicine, the growing primary health-care needs of Southern West Virginia will not be met," he added.

David G. Todd, a member of the Board of Advisors, was Chairman of the task force.

The group concluded that the programs and emphasis of the School of Medicine are properly directed toward meeting its intended mission and objectives. It also said that the school is fulfilling its commitment to provide well-qualified doctors for rural West Virginia and has greatly improved the accessibility, quality and scope of health care given to veterans.

The task force urged that in determining the funding for medical education, state legislators put their primary focus on meeting West Virginians' health-care needs. The group further urged legislators to allow West Virginia to realize its potential for national leadership in providing rural and community primary health care.

It recommended that the School of Medicine continue to pursue its mission of providing primary health care, continue to strengthen its relationship with area doctors and hospitals, and continue to expand its outreach programs.

Todd also cited several other areas he said particularly impressed task force members:

- The School's major role in bringing medical advances to the region and helping Huntington become a regional referral center for southern West Virginia;
- The "remarkable" change the school's involvement has made in health care for veterans, through improvements in facilities, the range of services, and the quality of care provided;
- The significant amount of outreach medical care that School of Medicine faculty, residents and students provide in rural West Virginia through outreach clinics and special programs;
- The impact the School continues to have through its graduates, who are working or receiving further training in 22 West Virginia counties; and
- The School's strong economic contributions to the state, both by bringing tens of millions of new dollars into the state and by providing millions of dollars' worth of uncompensated care.

Compiled from material furnished by the Office of University Relations, Marshall University.

AIDS Vaccine Leader Honored

Dr. Robert B. Belshe, whose work on vaccine against AIDS and other diseases has drawn international attention and millions of research dollars to West Virginia, has been chosen by his colleagues at MU to be the Spring 1988 recipient of the Meet-the-Scholar Award.

Dr. Christopher Dolmetsch, Chairman of the Selection Committee, noted that Doctor Belshe's efforts led Marshall to become one of only six centers nationwide authorized by the National Institute of Health to test potential AIDS vaccines in humans.

"The committee also was impressed by Dr. Belshe's contribution to the community through his support of an AIDS telephone hotline and his frequent presentations to the public, the news media, and physicians' organizations," he said.

Doctor Belshe joined the Marshall faculty in 1978, and now is Chief of the Section of Infectious Diseases as well as Director of the Vaccine Development Center.

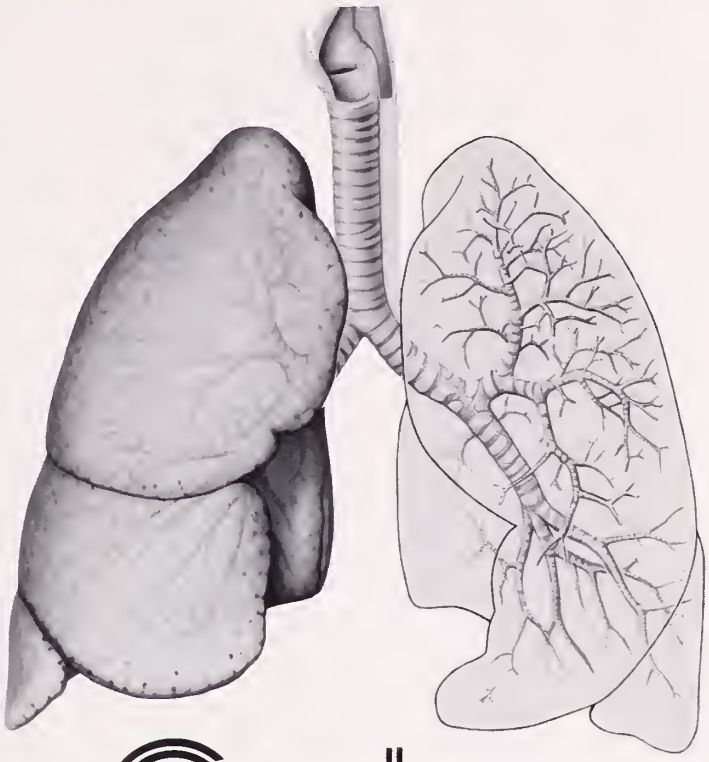
Ulcer Drug Grant

Doctor T. Ulf Westblom has received a $20,000 grant from The Upjohn Company which allows him to test the antibiotic Clindamycin as a possible ulcer treatment.

Doctor Westblom said that evidence in Huntington bears out other studies linking Campylobacter pylori with duodenal and stomach ulcers. A preliminary study of 75 patients with stomach irritation showed that Campylobacter pylori was present in 64 per cent of them.

To identify who has the organism, Doctor Westblom uses a modified urease test which he and others in the School of Medicine developed. The new test improves accuracy and provides results in one hour rather than 24.

Consider the causative organisms...



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Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

PA 0709 AMP

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630

County Societies

McDOWELL

The McDowell County Society met March 8 at Welch Emergency Hospital.

Dr. Emmanuel Sudhakaran spoke on "The New Antiarrhythmic Therapies."

A copy of the centennial newspaper regarding Stevens Clinic Hospital and Welch Emergency Hospital (Miners' No. 1) from the Welch Daily News of 1958 was given to members during the business meeting.—James A. Wilson, M.D., Secretary.

MINGO

The Mingo County Medical Society met March 2 at Williamson Memorial Hospital.

Dr. Cordell A. De La Pena, President of the WVSMA, gave an informal address touching on the liability crisis in the state and what the Association is doing to help the physician. He also mentioned briefly PRO, PPO, AIDS, Medicare, FMGs and nursing—Pastor C. Gomez, M.D., Secretary-Treasurer.

MONONGALIA

Scott Anderson, a pharmacist, was the guest speaker for the meeting of the Monongalia County Medical Society March 1.

Anderson spoke on communication between pharmacists and M.D.s.—Robert L. Murphy, Executive Secretary.

WESTERN

Dr. Cordell A. De La Pena, WVSMA President, was guest speaker for the meeting of the Western Medical Society March 8 in Spencer at Roane General Hospital.

Dr. Erlinda L. De La Pena, Doctor De La Pena's wife, also was present.

The WVSMA President spoke on recent legislation that had been introduced in the state Legislature.

New officers were elected.—Ali H. Morad, M.D., Secretary.

Obituaries

CURTIS G. POWER, JR., M.D.

Word recently was received by the *Journal* of the death of Dr. Curtis G. Power, Jr., of Martinsburg August 28, 1987, at his home. He was 51.

Doctor Power, a native of Martinsburg, was a surgeon.

He was graduated from West Virginia University, and received his M.D. degree in 1961 from the Medical College of Virginia. He served his internship at the U.S. Naval Hospital in Philadelphia and his residency at the U.S. Naval Hospital in Portsmouth, Virginia.

A Fellow of the American College of Surgeons, Doctor Power was a member of the Eastern Panhandle Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Charlene S. Power.

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You'll also have an opportunity to participate in a number of programs in which you'll be able to exchange views and information with other orthopedic surgeons from all over the country.

The Army Reserve understands the time demands on a busy physician, so you can count on us to be totally flexible in making time for you to share your specialty with your country. We'll arrange your training program to work with your practice.

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New Members

The following physicians and students were welcomed in March as new members of the West Virginia State Medical Association:

Cabell

Richard Ansinelli, M.D., 1115 20th Street, Huntington, 25703, Cardiology/Internal Medicine

Allen Chamberlain, M.D., 531 6th Avenue, Huntington 25701, Obstetrics/Gynecology

Paul Eberts, M.D., 531 6th Avenue, Huntington 25701, Family Medicine

Joseph E. Evans, M.D., 1350 Elm Street, Huntington 25701, Pediatrics

Johnnie L. Gallemore, Jr., M.D., 1801 6th Avenue, Huntington 25701, Psychiatry

Robert A. Hess, M.D., 1115 20th Street, Huntington 25703, Family Practice

Gary L. Merrell, M.D., Suite 510, 2828 1st Avenue, Huntington 25702, Thoracic Surgery

Craig M. Morgan, M.D., 1151 Hal Greer Boulevard, Huntington 25701, Ophthalmology

Howard Quittner, M.D., VA Medical Center, Huntington 25704, Clinical Pathology

Sriratana Ratanamalaya, M.D., Suite 300, 2828 1st Avenue, Huntington 25702, General Surgery

Waseem Shora, M.D., 1314 5th Avenue, Huntington 25701, Gastroenterology/Internal Medicine

Stanton J. Smith, M.D., 6137 Country Club Drive, Huntington 25705, Psychiatry

Margaret M. Stroz, M.D., 1801 6th Avenue, Huntington 25701, Family Practice

Robert E. Turner, M.D., 1115 20th Street, Huntington 25703, Family Practice

Stephen A. Wolf, M.D., 1801 6th Avenue, Huntington 25701, General Surgery/Pediatrics Surgery

Eastern

Sayeed Ahmed, M.D., VA Medical Center, Martinsburg 25401, Internal Medicine/Cardiology

Katherine H. Gustin, M.D., 125 Medical Circle, Winchester, VA 22601, Neurology

John E. McAllister, M.D., 125 Medical Circle, Winchester, VA 22601, Neurosurgeon

George L. Sheppard, M.D., 125 Medical Circle, Winchester, VA 22601, Neurology

Greenbrier

Albert H. Gelderman, M.D., Route 219 at Dunlap, PO Box 500, Union 24983, Pathology

Harrison

Juli S. Weiss, M.D., United Hospital Center, #3 Hospital Plaza, Clarksburg 26301, Anesthesiology

Kanawha

Ignacio D. Bernardo, M.D., 103 Sixth Avenue, South Charleston 25177, Family Practice

Samuel R. Davis, M.D., PO Box 190, Mt. Carbon 25139, Diagnostic Radiology

Howard R. Gordon, M.D., WVU Medical Center, 3110 MacCorkle Avenue, SE, Charleston 25304, Obstetrics/Gynecology

Mary L. McJunkin, M.D., Associated Radiologists, 200 Medical Arts Building, Charleston 25301, Diagnostic Radiology

John R. Reifsteck, M.D., Associated Radiologists, 200 Medical Arts Building, Charleston 25301, Diagnostic Radiology

Kimberly L. Skaff, M.D., 400 South Ruffner Road, Charleston 25314, Dermatology

Davis A. Sparks, M.D., Associated Radiologists, 200 Medical Arts Building, Charleston 25301, Diagnostic Radiology

Joe J. White, Jr., M.D., Suite 509, 3100 MacCorkle Avenue, SE, Charleston 25304, Gastroenterology

Kenneth C. Wright, M.D., CAMC/Rehabilitation Division, PO Box 1393, Charleston 25325, Rehabilitation

McDowell

Milan R. Grujic, M.D., Drawer A, Yukon 24988, Pediatrics/General Practice

Sutip Kunajukr, M.D., Welch Emergency Hospital, Welch 24801, Obstetrics/Gynecology

Charles E. Michaelis, M.D., Welch Emergency Hospital, Welch 24801, Anesthesiology

Mercer

Kathy E. Wides, M.D., 721 Edgewood Road, Bluefield 24701, Internal Medicine

Monongalia

Patton Van Meter Nickell, M.D., WVU Medical Center, Department of Behavioral Medicine, Morgantown 26506, Pediatrics/Internal Medicine

Ohio

Majorie L. Bush, M.D., 1300 Chapline Street, Wheeling 26003, General Surgery/Plastic Surgery

Michael L. Slaysman, M.D., 25 Forest Hills, Wheeling 26003, Radiology

Preston

Mark T. Domenick, M.D., PO Box 510, Terra Alta 26764, Family Practice

Raleigh

Hassan Amjad, M.D., 113 George Street, Beckley 25801, Internal Medicine/Oncology

Robert C. Belding, M.D., VA Medical Center, 200 Veterans Avenue, Beckley 25801, Pathology

Anthony T. Dinh, M.D., 200 Veterans Avenue, Beckley 25801, Internal Medicine

Gary S. Lytle, M.D., Cannell Clinic, PO Box 550, Beaver 25813, Pediatrics

Bonnie L. Marr, M.D., PO Box 1571, Beckley 25801, Pediatrics

John H. Samuels, M.D., 1602 Harper Road, Beckley 25801, Pediatrics

Students

Greta V. Guyer, 40 Hamill Road, Huntington 25701-4756

Tyshaun M. James, Apartment 5, 1125 11th Street, Huntington 25701

Kevin M. Patterson, 76½ Grandview Avenue, Morgantown 26505

Dawn D. Sturgill, 1954 Underwood Avenue, Huntington 25701

Timothy L. Thistlethwaite, 147 Manchester Drive, Morgantown 26505

CHILD'S PLAY IS NOT ENOUGH.

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- Make a conscious effort to monitor the type and amount of exercise your child gets both in and out of school.
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With the right amount of daily exercise, teenagers and children of all ages will get the most from school . . . and play.

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(sucralfate) Tablets

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

References:

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4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
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0825A8

Ulcer therapy that won't yield, even to smoking

What do you do for duodenal ulcer patients who should stop smoking, but won't? Both cimetidine[1] and ranitidine[2] have been shown less effective in smokers than nonsmokers.

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Ulcer healing rates:
(at four weeks of therapy)[5]

Sucralfate:	
All patients	79.4%
Smokers	81.6%*
Cimetidine:	
All patients	76.3%
Smokers	62.5%

*Significantly greater than cimetidine smoker group ($P < .05$)

Carafate has a unique, nonsystemic mode of action that enhances the body's own ulcer healing ability and protects the damaged mucosa from further injury.

When your ulcer patient is a smoker, prescribe the ulcer medication that won't go up in smoke: safe, nonsystemic Carafate.

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Please see adjoining page for references and brief summary of prescribing information.

0825A8

ARMY RESERVE MEDICAL PROFILE NO.7

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

Soldier being examined for effects of high-altitude cerebral edema

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K-DUR™ 20 Microburst Release System™
(potassium chloride) 20mEq Sustained Release Tablets

A daily prophylactic dose in a single tablet.

Please see next page for brief summary of prescribing information.

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K-DUR™ Microburst Release System™

(potassium chloride) Sustained Release Tablets

INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS.

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics, see **WARNINGS.**

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE).** There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS);** other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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They're not.

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They don't.

Some people even laugh at the symptoms.

They shouldn't.

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Before prescribing, see complete prescribing information in SK&F LAB CO. literature or PDR. The following is a brief summary.

Contraindications: There are no known contraindications to the use of 'Tagamet'.

Precautions: While a weak antiandrogenic effect has been demonstrated in animals, 'Tagamet' has been shown to have no effect on spermatogenesis, sperm count, motility, morphology or in vitro fertilizing capacity in humans.

In a 24-month toxicity study in rats at dose levels approximately 9 to 56 times the recommended human dose, benign Leydig cell tumors were seen. These were common in both the treated and control groups, and the incidence became significantly higher only in the aged rats receiving 'Tagamet'.

Rare instances of cardiac arrhythmias and hypotension have been reported following the rapid administration of 'Tagamet' HCl (brand of cimetidine hydrochloride) injection by intravenous bolus.

Symptomatic response to 'Tagamet' therapy does not preclude the presence of a gastric malignancy. There have been rare reports of transient healing of gastric ulcers despite subsequently documented malignancy.

Reversible confusional states have been reported on occasion, predominantly in severely ill patients.

'Tagamet' has been reported to reduce the hepatic metabolism of warfarin-type anticoagulants, phenytoin, propranolol, chlordiazepoxide, diazepam, lidocaine, theophylline and metronidazole. Clinically significant effects have been reported with the warfarin anticoagulants; therefore, close monitoring of prothrombin time is recommended, and adjustment of the anticoagulant dose may be necessary when 'Tagamet' is administered concomitantly. Interaction with phenytoin, lidocaine and theophylline has also been reported to produce adverse clinical effects.

However, a crossover study in healthy subjects receiving either 'Tagamet' 300 mg. q.i.d. or 800 mg. h.s. concomitantly with a 300 mg. b.i.d. dosage of theophylline (Theo-Dur®, Key Pharmaceuticals, Inc.), demonstrated less alteration in steady-state theophylline peak serum levels with the 800 mg. h.s. regimen, particularly in subjects aged 54 years and older. Data beyond ten days are not available. (Note: All patients receiving theophylline should be monitored appropriately, regardless of concomitant drug therapy.)

Lack of experience to date precludes recommending 'Tagamet' for use in pregnant patients, women of childbearing potential, nursing mothers or children under 16 unless anticipated benefits outweigh potential risks; generally, nursing should not be undertaken in patients taking the drug since cimetidine is secreted in human milk.

Adverse Reactions: Diarrhea, dizziness, somnolence, headache, rash. Reversible arthralgia, myalgia and exacerbation of joint symptoms in patients with preexisting arthritis have been reported. Reversible confusional states (e.g., mental confusion, agitation, psychosis, depression, anxiety, hallucinations, disorientation), predominantly in severely ill patients, have been reported. Gynecomastia and reversible impotence in patients with pathological hypersecretory disorders receiving 'Tagamet', particularly in high doses, for at least 12 months, have been reported. Reversible alopecia has been reported very rarely. Decreased white blood cell counts in 'Tagamet'-treated patients (approximately 1 per 100,000 patients), including agranulocytosis (approximately 3 per million patients), have been reported, including a few reports of recurrence on rechallenge. Most of these reports were in patients who had serious concomitant illnesses and received drugs and/or treatment known to produce neutropenia. Thrombocytopenia (approximately 3 per million patients) and a few cases of aplastic anemia have also been reported. Increased serum transaminase and creatinine, as well as rare cases of fever, interstitial nephritis, urinary retention, pancreatitis and allergic reactions, including hypersensitivity vasculitis, have been reported. Reversible adverse hepatic effects, cholestatic or mixed cholestatic-hepatocellular in nature, have been reported rarely. Because of the predominance of cholestatic features, severe parenchymal injury is considered highly unlikely. A single case of biopsy-proven periportal hepatic fibrosis in a patient receiving 'Tagamet' has been reported.

How Supplied: Tablets: 200 mg. tablets in bottles of 100; 300 mg. tablets in bottles of 100 and Single Unit Packages of 100 (intended for institutional use only); 400 mg. tablets in bottles of 60 and Single Unit Packages of 100 (intended for institutional use only), and 800 mg. Tiltab® tablets in bottles of 30 and Single Unit Packages of 100 (intended for institutional use only).

Liquid: 300 mg./5 ml., in 8 fl. oz. (237 ml.) amber glass bottles and in single-dose units (300 mg./5 ml.), in packages of 10 (intended for institutional use only).

Injection:

Vials: 300 mg./2 ml. in single-dose vials, in packages of 10 and 30, and in 8 ml. multiple-dose vials, in packages of 10 and 25.

Prefilled Syringes: 300 mg./2 ml. in single-dose prefilled disposable syringes.

Plastic Containers: 300 mg. in 50 ml. of 0.9% Sodium Chloride in single-dose plastic containers, in packages of 4 units. No preservative has been added.

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Exposure of the premixed product to excessive heat should be avoided. It is recommended the product be stored at controlled room temperature. Brief exposure up to 40°C does not adversely affect the premixed product.

'Tagamet' HCl (brand of cimetidine hydrochloride) Injection premixed in single-dose plastic containers is manufactured for SK&F Lab Co. by Travenol Laboratories, Inc., Deerfield, IL 60015.

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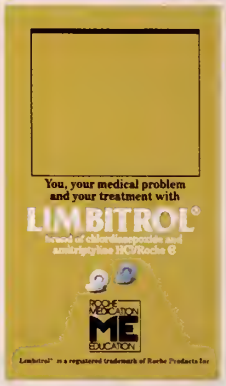

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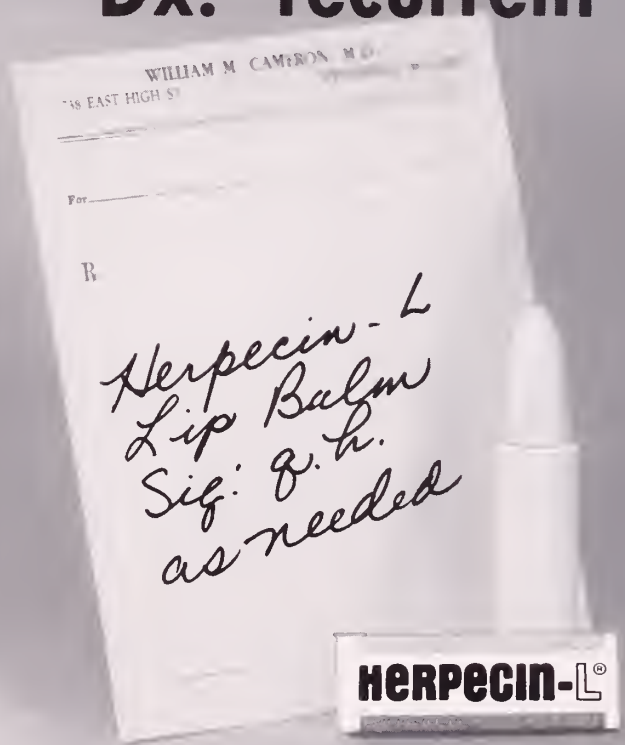

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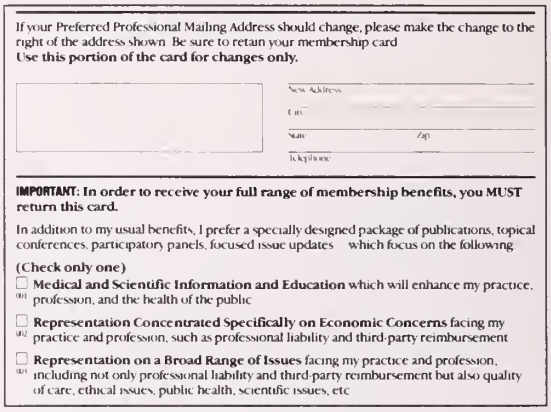

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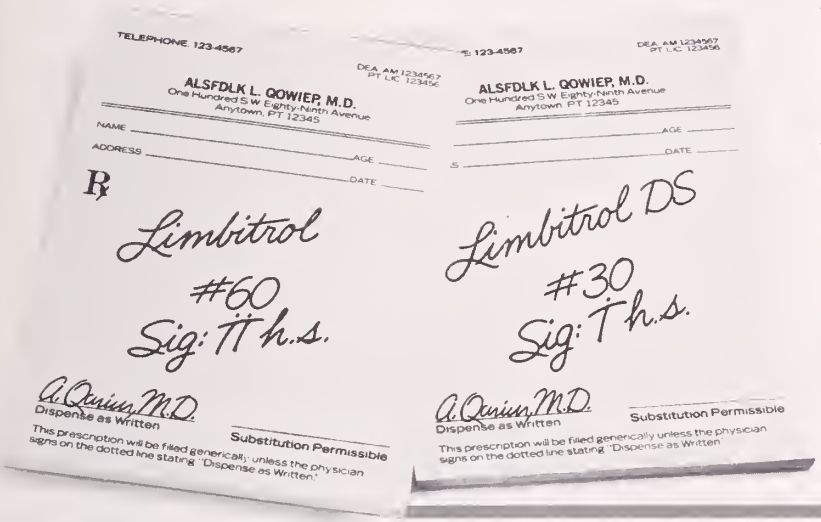

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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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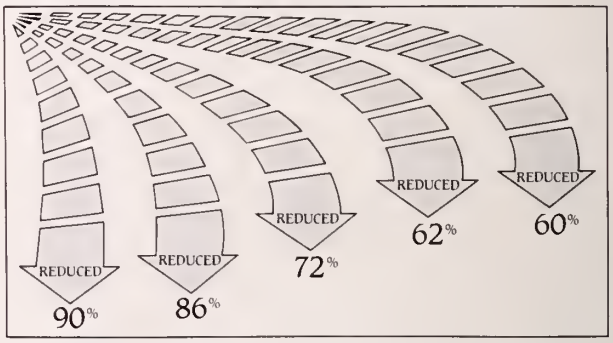
Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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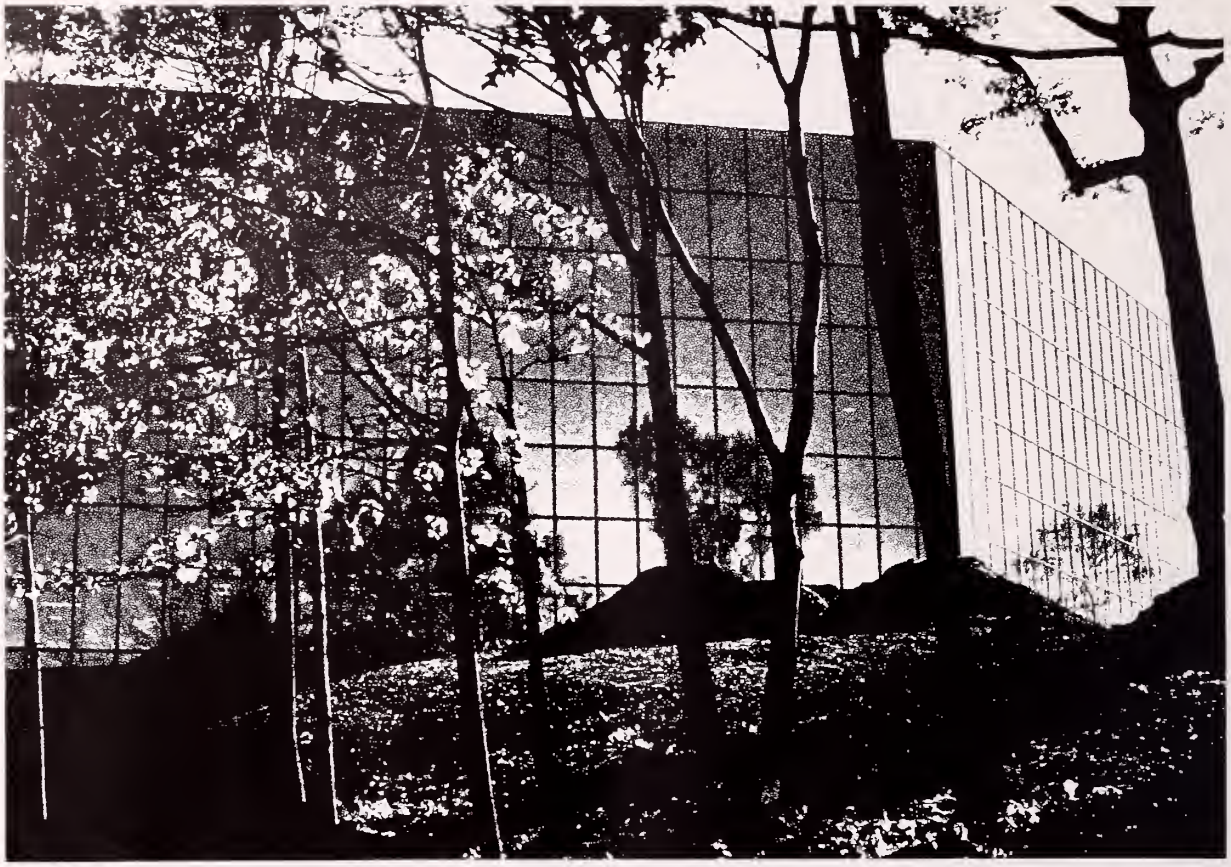
Fishermen drop anchor on the Greenbrier River. Photo courtesy of *Wonderful West Virginia* Magazine. Arnout Hyde, Jr., photographer.



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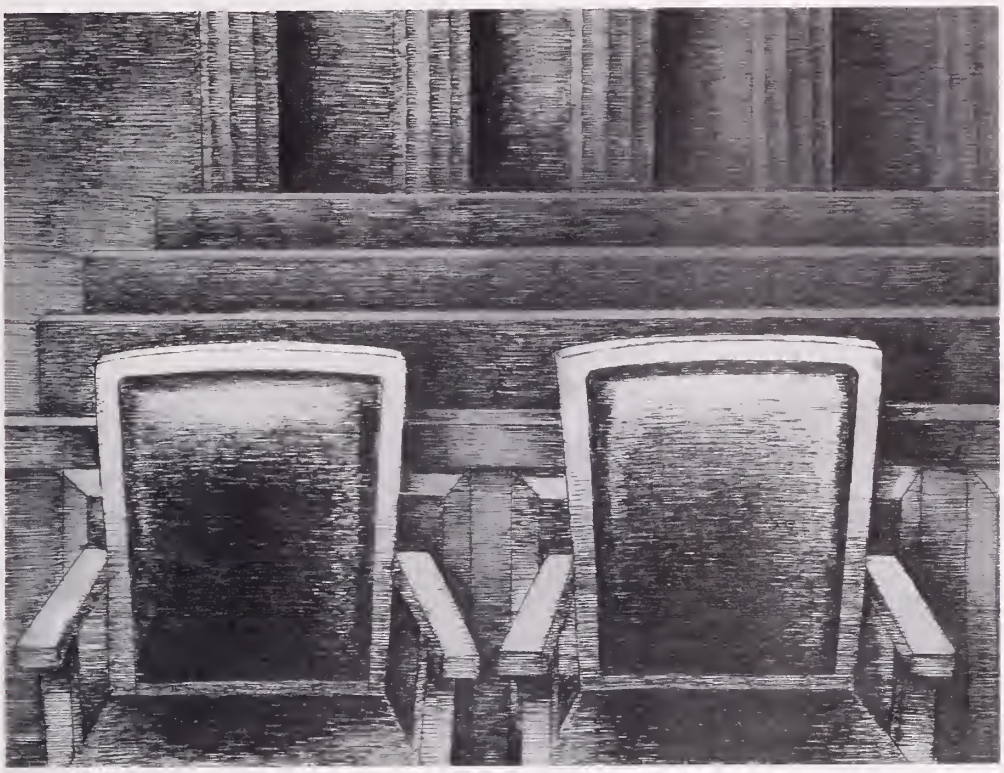

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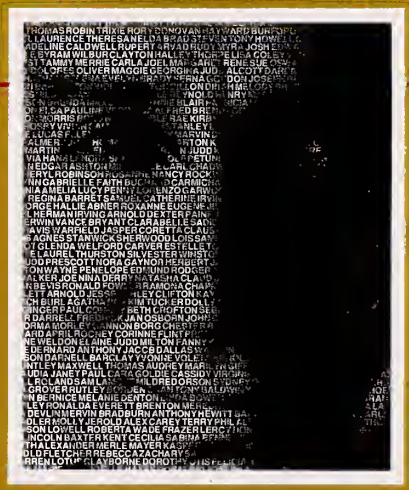

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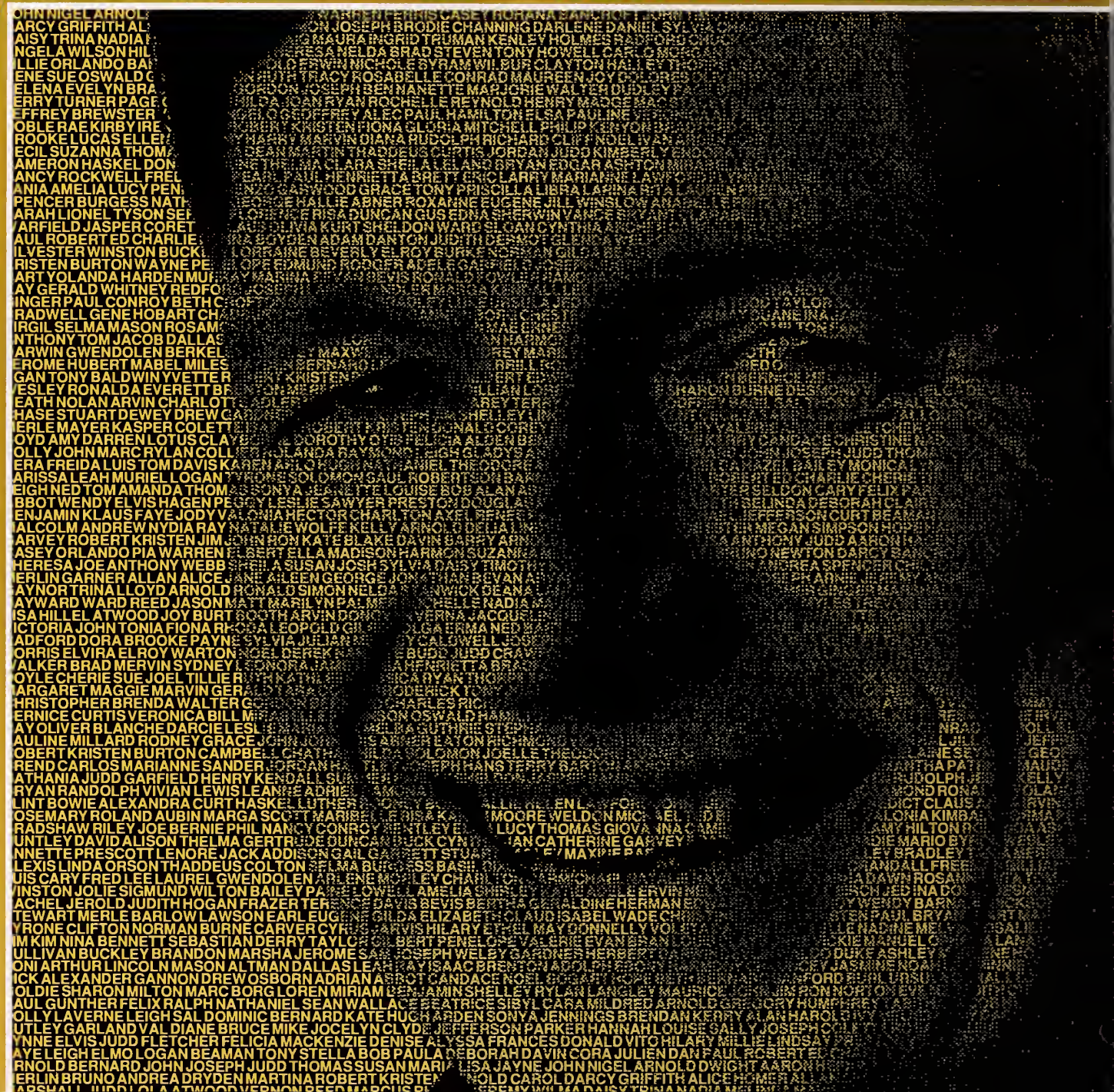

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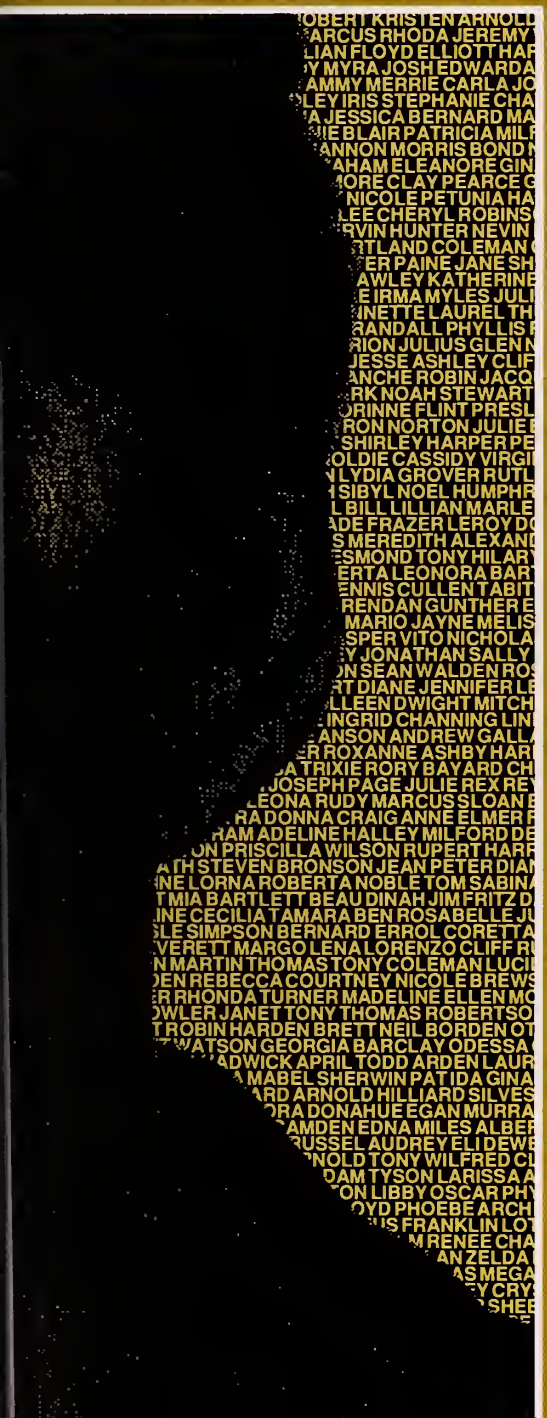

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In a recent survey, 4,120 participating physicians gave us their views[1] on INDERAL LA in the treatment of hypertension, angina and migraine.

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...of the nearly three out of four physicians responding to the questionnaire, an impressive 97% rated INDERAL LA good to excellent for overall performance. Virtually all cited efficacy, tolerability, long-term cardiovascular protection and once-daily convenience as important factors in their choosing to prescribe INDERAL LA.

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...Virtually every responding physician rated patient satisfaction with INDERAL LA to be as good as, or better than, other beta blockers.

Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree and bronchial asthma.

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LONG ACTING CAPSULES
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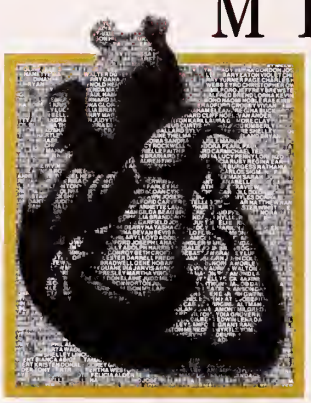

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INDERAL® LA

(PROPRANOLOL HCl) LONG ACTING CAPSULES 60,80,120,160 mg

The one you know best keeps looking better

60 mg 80 mg 120 mg 160 mg

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure, and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL (propranolol HCl) is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure, or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Reference:

1. Data on file, Ayerst Laboratories.

D7295/188

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Surgically Curable Hypertension Associated With Juxtaglomerular Cell Tumor

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The twentieth case of juxtaglomerular cell tumor of the kidney is described herein. Clinical, radiological, light and electron microscopic features are reviewed.

Initially recognized 18 years ago, there are now 20 documented cases of juxtaglomerular cell tumors of the kidney (JGCT) (1-19). The JGCT is a benign renal tumor and a rare, surgically curable cause of hypertension.

Case Report

A 26-year-old white female was hospitalized for evaluation of poorly controlled hypertension in association with severe cephalgia. She was a known hypertensive for five years and thought to be non-compliant with her medical regimen. Blood pressure upon admission was 210/130 mmHg. Medical management included a 50 mg. thiazide diuretic daily and metaprolol tartrate 100 mg twice a day.

Physical examination was remarkable only for Grade II hypertensive retinopathy. Laboratory evaluation revealed an elevated peripheral renin level of 25 mg/dl. The serum BUN and creatinine were 11 and 1.2 mg/dl., respectively, and the creatinine clearance was reduced to 68 ml/min. corrected to body surface area. Thyroid function electrolytes, and 24-hr. urinary catecholamines were all normal.

A hypertensive intravenous pyelogram and renal sonogram were normal. The renal scan, however, did demonstrate dampened, right-sided uptake consistent with renal artery stenosis.

Renal angiography was then performed and found to be completely normal. While maintained on the above mentioned antihypertensive medications, subsegmental renal vein renins were sampled. Localization of the lesion to the inferior pole of the right kidney was confirmed with renin measurements of 18 ng/dl in the upper pole and 75 ng/dl in the lower pole.

Based on these renin determinations, a right renal exploration was performed. Exposure and palpation of the kidney failed to reveal a peripheral lesion, however, and the kidney was removed.

The patient was normotensive in the immediate perioperative period, and all antihypertensive medications were discontinued prior to discharge. Peripheral renin levels and blood pressure were normal one year after nephrectomy and, at four years, there is no evidence of recurrent disease.

The gross pathologic findings were that of a 2.5 cm-round, well-encapsulated, grayish-tan tumor in the mid-portion of the kidney. The tumor nodule was confined to the renal parenchyma with no evidence of extension beyond the capsule or into the renal pelvis (Figure 1). Light microscopy showed a tumor encapsulated without evidence of parenchymal, vascular or lymphatic spread. The cytology is that of small cells with a granular cytoplasm and oval nuclei demonstrating a fine chromatin and vesicular appearance.

Electron microscopy showed tumor cells surrounded by a basement membrane-like material which included connective tissue fibrils. The prominent cell type was that of the juxtaglomerular cells containing

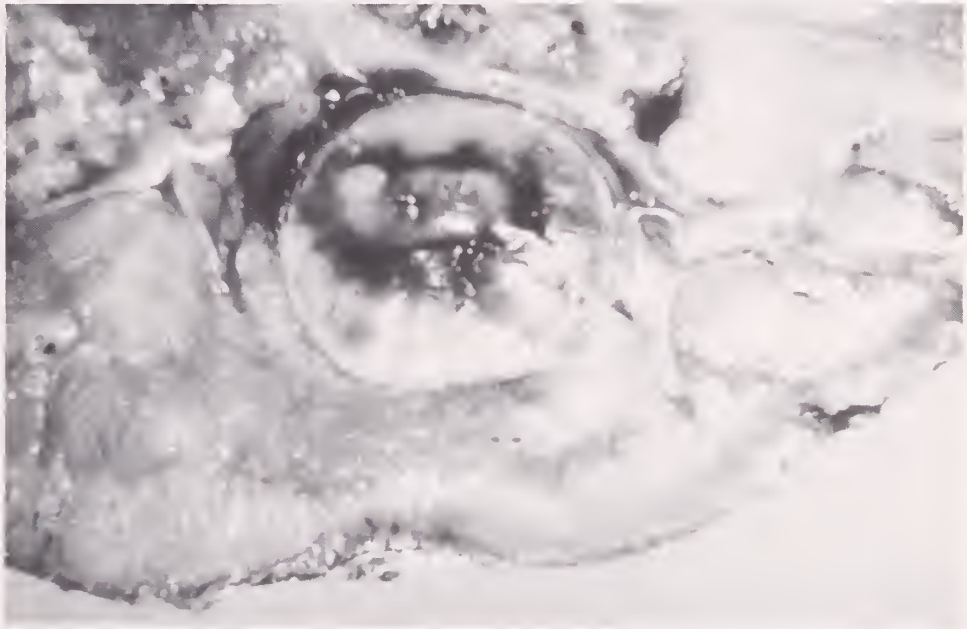

Figure 1.

rhomboidal crystalline granules with lattice spacing. The granules measured from 0.2m to 1.5m in their longest axis (Figure 2).

Discussion

Angiography will usually show JGCT to be a peripherally located hypovascular lesion. However, there are now three false negative studies (10). Standard renal angiography or digital subtraction angiography is essential in the exclusion of vascular lesion as the cause of hyperrenemia as well as for defining the vascular anatomy. The latter are becoming more important as partial nephrectomy and local resection are now recommended for the treatment of JGCT (18).

The routine performance of CT studies is in part responsible for the increased number of JGCT diagnosed. Although not employed in this case, the CT scan should be used early in the evaluation of adrenal and renal lesions.

Pathologic evaluation will require both light and electron microscopy to establish the diagnosis of JGCT with certainty. Although the light microscopy picture is usually characteristic, the ultrastructure identification must be made for absolute diagnosis.

Differential diagnostic considerations for a patient with hypertension, hyperrenism and secondary hyperaldosteronism should include renal artery stenosis, incipient malignant hypertension, renin-secreting tumors and other masses that compress renal parenchyma.

In conclusion, the JGCT represents a rare, curable cause of hypertension and, with typical clinical and radiologic features, preoperative diagnosis is possible in most cases.

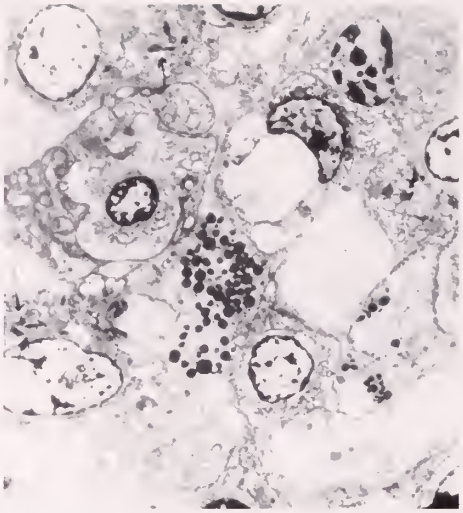

Figure 2.

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Fibrositis In Men

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The diagnosis of primary fibrositis (FS) was made in 71 men over a two-year period in a private rheumatology practice. This amounted to 34 per cent of the total FS patients seen during that time. The reasons for the relatively high proportion of men with this disorder is discussed. The treatment of the male FS patients depended more on behavior modification or change in work conditions than on pharmacologic agents. Certain factors indigenous to the upper Ohio Valley may be contributing to this phenomenon. These are discussed.

Introduction

Fibrositis (FS) is a soft-tissue rheumatism condition that is becoming increasingly well-recognized as a cause of chronic pain and discomfort, lost days from work, and decreased efficiency in those patients afflicted. Several articles (1-3) recently have been published that emphasize the importance of considering this disorder in the differential diagnosis of any patient with musculoskeletal pain. In fact, it has been estimated that FS may be the third most common rheumatic disorder (4) and is likely to confront physicians of all specialities. My experience parallels that of Mazanec (5) in that roughly 20 per cent of my practice is comprised of patients with FS. However, unlike most of my colleagues who find that the female-to-male ratio is six to one or greater (1,4), I have found this ratio to be considerably lower. The following communication describes my experience in more detail and offers some explanations for this discrepancy.

TABLE 1
Diagnosis of Primary Fibrositis

1. History of chronic muscular aching in more than three anatomical sites for more than three months' duration accompanied by complaints of fatigue, morning stiffness or gelling phenomena.
2. History of difficulty sleeping, especially intermittent sleep.
3. Physical examination demonstrating:
   (a) At least (5) tender myofascial trigger points
   (b) Absence of synovitis, nodules, rash or signs of focal weakness or inflammation
   (c) Presence of muscular tautness or spasm in the upper or lower extremities.
4. Normal laboratory tests.

Results

Patient Profile:

A chart review was conducted which encompassed two years of a solo private medical practice that was limited to rheumatology. An urban, rural and suburban population of 250,000 was served. A total of 771 patients were seen (203 or 26 per cent were men, and 586 or 74 per cent were women), with 208 (27 per cent) diagnosed as having primary FS. Of these, 71 (34 per cent) were men and 137 (66 per cent) were women. Table 1 illustrates the criteria for the diagnosis of primary FS. These criteria are in agreement with those of other authors (1,4,6) and, of course, exclude those patients suffering from other disorders such as various forms of arthritis, infectious diseases and neoplasia. Those patients who had a sleep disorder, trigger/tender points and myofascial pain but who also had an underlying medical problem were given the diagnosis of secondary FS (7) and not included in the study.

A socio-economic profile of the 71 male primary FS patients is shown in Table 2. Fourteen (19 per cent) were unemployed for more than six months, and 41 (58 per cent) worked a different eight-hour shift each week; many of these men worked shifts back to back on a regular basis. Another 16 (23 per cent) were working but lost days from work because of their FS. Eight of these 16 had marital strife. Five of the 16 developed FS after death(s) and/or serious illness(es) in the family. Excessive job-related stress was present in two patients. No unusual or precipitating factor could be found in the remaining three patients.

Many chief complaints were noted in the male FS patient. The most frequent complaint was "arthritis" (18 per cent) although these patients had no synovitis, nodules or decreased range of motion of any joint. Ten patients (14 per cent) complained of fatigue. Other chief complaints were achiness all over (13 per cent), back pain (10 per cent), morning stiffness (eight per cent), gelling phenomena (seven per cent), arm weakness (seven per cent), arm/hand numbness (four per cent), leg weakness (three per cent) and others. Appropriate lab tests, x-rays, bone scans and/or electromyographs in addition to careful physical examinations were performed to rule out neurologic or rheumatologic diseases. Only if these tests were negative was the patient a candidate for the diagnosis of primary FS.

Table 3 illustrates the most common tender points in the male FS patient. Though the list resembles that found in the Yunus series (1), there were some differences. For example, 84 per cent of Yunus' patients (86 per cent female) experienced tenderness or palpation of the upper border of the trapezius

TABLE 2
Socioeconomic Profile of Male Fibrositis Patients

		Number	*Mean Age*	*(Range)*
Unemployed		14	32	(19-47)
Shift Work				
Coal Mine	28			
Chemical Plant	6	41	46	(31-60)
Steel Mill	7			
Other		16	48	(35-66)
Total		71	44	(19-66)

whereas only 35 per cent of the patients in my series were so affected. While 58 per cent of Yunus' patients had tender lumbar spine areas, only 30 per cent of patients in this series had similar tender areas. Similar values were found for the medial aspet of the knees (74 per cent vs. 78 per cent) and lateral humeral epichondylar area (62 per cent vs. 65 per cent). The reason for the discrepancies noted is unclear but the difference in the male:female ratios in both studies may be contributory.

Treatment:

The treatment of FS needs to be individualized (8). Bluestone (9) stated that the treatment of a disorder such as FS "calls for a great deal of sympathy, trust, and rapport between physician and patient." In addition to reassurance and pharmacologic agents such as non-steroidal anti-inflammatory drugs, muscle relaxants and sedatives to correct sleep imbalance were used either singly or in combination. Physical modalities such as local heat, "spray and stretch" regimens (10), and relaxation techniques (yoga, biofeedback) have proven useful in some patients. The injection of local tender/trigger points with a corticosteroid-anaesthetic mixture (11,12) was performed in selected patients, usually in conjunction with other modalities listed above.

In an attempt to normalize the sleep imbalance that is central to the generation and perpetuation of FS (13,14), nocturnal sedation with low-dose (10-25 mg.) of doxepin or amitriptyline may be successful. However, in patients whose work periods begin at different times of the day from week to week, this strategy has met with resistance and/or noncompliance. Communication with the employers of some of these patients has helped their treatment immensely. The employers of 41 patients who work shift-work were contacted. Of these, 15 or 37 per cent of the patients were able to change from a rotating type of shift to a steady (i.e., 8 A.M. - 4 P.M. or 4 P.M. - midnight) shift. Eleven of these 15 patients experienced a decline in their symptoms and no further lost days from work because of FS. These eleven patients continue to be managed effectively with low-dose tricyclic therapy at bedtime and occasional use of muscle relaxants. Since changing to a steady shift, none has required local injections or non-steroidal, anti-inflammatory agents.

TABLE 3

Tender Point Frequency In Male Primary FS Patients

Site	*Frequency Per Cent*
Medial Collateral Ligament of Knee	78
Lateral Humeral Epicondyle	65
Supraspinatus Tendon Area	62
Rhomboid Area	59
Biceps Tendon Area	52
Gluteus Medius Muscle	45
Trapezius Muscle	33
Lumbar Erector Spinae Muscles	30
Greater Femoral Trochanteric Area	30
Thoracic Erector Spinae Muscles	25
Sacoriliac Area	22
Ligamentum Nuchea C7	11
Rib Tip(s)	7

Discussion

The upper Ohio Valley area encompasses sections of eastern Ohio, northern West Virginia and western Pennsylvania. Previously, the area economy was dominated by coal mining and heavy industry. In recent years, however, it has changed from a production- to a service-oriented economy with resultant unemployment, job insecurity and social change. The area has one of the highest unemployment rates in the nation, and the economic recovery that most of the country has realized is still expected here. Since FS is intensified by stress and fueled by a sleep disorder, it is not surprising that many of the male residents have developed it. Because of the requirements in many of the area mills and mines that employees rotate their work shifts, many of the men develop problems sleeping, especially during the time they are working midnight to 8 A.M. Allowing some of my patients to work a steady shift has eased their FS symptoms. However, attempting to change work schedules to allow the FS patients to establish a fixed sleep period (e.g., switching to steady day or afternoon turns or the elimination of the midnight-to-8 A.M. work shift) has met with resistance from the patients and employers alike. Most of the workers concerned, fearing job termination or loss of seniority or benefits, have asked me not to intercede for them, and many employers, arguing that preferential treatment to my FS patients is unfair to their other workers, have resisted schedule modifications.

Fibrositis is certainly a controversial clinical disorder, and psychologic factors certainly do appear to play a part in its generation and perpetuation (15). The association between this disorder and poor sleep was fairly obvious on questioning all of the male patients included in this communication, and polysomnographs were not needed to document sleep problems. Care was taken to distinguish FS from psychogenic rheumatism using Beetham's criteria (7). Based on the response to change in work schedules in addition to the effects of more conventional modes of therapy, I must conclude that primary fibrositis is a discreet entity in the area of soft-tissue rheumatism that is influenced by psychologic and physical factors. It is readily definable using certain distinct criteria, and it can affect men much more frequently than previously realized given the appropriate environmental setting.

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Physicians' Cholesterol Education Program

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The National Institute of Health has launched a major program to reduce cardiovascular morbidity and mortality caused by hypercholesterolemia. It is hoped that the efforts and results of this program match those of the 1960s and 1970s to identify and treat hypertension. In conjunction with this program, the American Heart Association is sponsoring a Physicians' Cholesterol Education Program. The specific aim of the latter program is to instruct primary care physicians throughout the country in the current guidelines on detecting and treating hypercholesterolemia in adults.

Risk Stratification

In brief, these guidelines call for measuring the cholesterol of every adult over the age of 20, and retesting at least every five years. Nonfasting cholesterol levels can be checked for initial sceening purposes. Those with cholesterol levels below 200 mg/dl are at low risk for developing atherosclerosis, and are provided with advice on modification of other risk factors. To maintain these low cholesterol levels, they are also given dietary advice to achieve and maintain a normal body weight, and limit consumption of total fat, saturated fat, and cholesterol.

Those with cholesterol levels of 240 mg/dl or greater are at high risk for developing atherosclerosis, and are candidates for more intensive therapy. It is felt that the best yardstick to assess the specific need for and response to therapy is the low-density lipoprotein (LDL) cholesterol. LDL cholesterol is a particularly atherogenic cholesterol fraction, in contrast to high-density lipoprotein (HDL) cholesterol, which actually seems to be protective against atherosclerosis. LDL cholesterol can be estimated as follows: LDL cholesterol = total cholesterol - (HDL cholesterol + triglycerides/5). Because this estimate incorporates a measure of triglycerides, it should be done on a fasting sample.

"The specific aim . . . is to instruct primary care physicians throughout the country in the current guidelines on detecting and treating hypercholesterolemia in adults."

Patients with cholesterol levels between 200 and 239 mg/dl are managed according to the associated presence or absence of additional risk factors including male gender, family history, smoking, diabetes, hypertension, HDL cholesterol below 35 mg/dl, cerebrovascular or peripheral arterial disease, and marked obesity. Those with definite coronary artery disease (angina, myocardial infarction) or two or more additional risk factors are at high risk, and are managed as those with cholesterol levels of 240 mg/dl or greater. Those with intermediate cholesterol values but without definite coronary artery disease or two additional risk factors are given dietary instruction and advised to have their cholesterol rechecked in one year.

The cholesterol cutpoints advocated by the panel are lower than those employed by many practicing physicians. They are also not age adjusted; they apply to all adults over the age of 20. Screening guidelines for children and adolescents will be announced in the future by another panel of the National Cholesterol Education Program.

Treatment

Further management based on estimated LDL cholesterol levels (preferably the mean of two-three readings drawn several weeks apart) is outlined in the table.

Dietary treatment is the first line of therapy, and is divided into two progressive steps. In Step 1 fat calories are limited to 30 per cent of the dietary total (the present dietary average is 40 per cent), and saturated fat calories to 10 per cent of total calories. Cholesterol is limited to 300 mg (roughly 1 egg yoke) per day. These dietary limits are not unrealistically low and should be attainable by most patients. In Step 2, those who have not responded to Step 1 are further restricted to seven per cent of total calories as saturated fat and 200 mg of cholesterol per day. The Step 1 diet should reduce cholesterol levels by about 35 mg/dl, and the Step 2 diet by about 50 mg/dl. Individual patients will naturally vary in their response to dietary changes. It is recommended that patients be tried conscientiously on dietary therapy for four-six months before considering drug treatment. The assistance of a registered dietitian can be very helpful in counseling patients about these cholesterol-lowering diets.

Those whose LDL cholesterols do not fall sufficiently on dietary therapy alone are considered for additional therapy with drugs. Drug therapy should be added to, not substituted for, dietary treatment. The drugs of first choice include the bile acid sequestrants (cholestyramine and colestipol) and nicotinic acid. The former are generally effective in adequate dosage. The major drawback to their use is expense ($600/year to pharmacist, considerably more to patients). Nicotinic acid is very inexpensive but can cause uncomfortable flushing. It is probably the most practical first line cholesterol-lowering drug for most patients. It should be started at very low dosage (50 mg t.i.d. with meals), and increased gradually up to an average therapeutic dose of 500-1000 mg t.i.d. Aspirin and other nonsteroidal anti-inflammatory drugs reduce the severity of associated flushing. Other cholesterol-lowering drugs, including the recently released lovastatin, are not recommended at this time as first-line therapy.

TABLE

Classification Based on LDL Cholesterol

LDL Cholesterol	*Management*
<130 mg/dl ("Desirable")	Recheck total cholesterol within 5 years; general dietary and risk factor education.
130-160 mg/dl ("Borderline High-Risk")	If patient does not have overt coronary artery disease or 2 associated risk factors, initiate Step 1 diet and recheck total cholesterol yearly. If patient has overt coronary heart disease or 2 associated risk factors, manage as "High-Risk," below.
>160 mg/dl ("High-Risk")	Evaluate for seconadry hyperlipidemia (e.g., hyperthyroidism, nephrotic syndrome, liver disease) and familial disorders. Set goal LDL cholesterol: <130 mg/dl if overt coronary disease or 2 associated risk factors present, otherwise < 160 mg/dl. Initiate Step 1 diet; Step 2 diet and drug therapy for selected patients, depending on response. See text for details.

Adapted from Highlights of the Report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults, N.I.H. Publication No. 88-2926).

Additional information about the Physicians' Cholesterol Education Program in West Virginia is available through the American Heart Association, West Virginia Affiliate, and may be obtained by calling (304) 346-5381. A series of talks throughout the state is also being organized to elaborate further on the screening and treatment guidelines discussed in this article.

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Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults. Arch Intern Med 1988; 148:36-69.

Manuscript Information

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The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

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Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

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Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

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Medical Grand Rounds

West Virginia University Medical Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Obesity: Sloth, Gluttony Or Inborn Error Of Metabolism?

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Obesity increases the risk of mortality and morbidity from heart attacks, hypertension, diabetes and some forms of cancer. It is associated with elevated cholesterol and triglycerides and low levels of high-density lipoproteins. Upper segment adiposity, that concentrated about the abdomen, is a greater risk than that about the hips and thighs. The economic costs of obesity-related illness are high. The causes of obesity are still not well understood and treatment is largely unsuccessful.

It is not clear whether people become fat because of eating too much or exercising too little. The strong genetic component to obesity has been explained variously by an abnormality in the adipose cell itself or by decreased ability to burn off excess calories. Improved life style with emphasis on increased physical activity should receive high priority in the public health approach to this problem.

"Turpor and sloth, turpor and sloth,
These are the cooks that unseason
the broth."
Ogden Nash (1)

Ogden Nash might have been talking about one of the major causes of obesity. He probably might also have asked, does it matter? Is obesity a problem?

In February, 1985, a National Institutes of Health Consensus Conference was held in Bethesda, Maryland, to consider that very question (2). Myriads of data were examined. The conclusions reached, among others, were that being 20 per cent or more over desirable weight constituted obesity, and that being overweight was a definite health hazard. The panel recommended that the body mass index be used as an indicator of degree of obesity.

Body Mass Index (BMI) = wt in Kg divided by the square of the height in meters, thus

$$BMI = kg/m^2$$

While this ratio indicates body mass rather than body fatness, it correlates very highly with body fatness or obesity. A BMI of about 22 approximates normal weight, of about 26 indicates 20 per cent overweight, and of about 30 indicates 40 per cent overweight and falls into the "very overweight" category. One hundred per cent or 100 pounds overweight or a BMI over 45 constitutes morbid obesity. With a single number it is thus possible to estimate the degree of obesity without reference to tables.

"Upper segment obesity . . . constitutes a greater risk for atherosclerosis than does adipose tissue deposited about the lower abdomen and hips and thighs."

Prevalence of Obesity: According to several national surveys, 26 per cent of the population is 20 per cent over recommended weight and is therefore obese (2), and 11 per cent is severly overweight. Blacks and the poor suffer from obesity more frequently.

Consequences of Obesity: Overweight of 20 per cent or more is a definite health hazard. Total mortality and cardiovascular disease mortality are higher (2). Death from hypertension, diabetes, digestive diseases and stroke and some forms of cancer increase with as little as 10 per cent overweight (3). Obesity is also highly correlated with a number of well-known risk factors for coronary artery disease such as plasma triglyceride concentrations and, to a lesser extent, cholesterol. It is inversely related to high-density lipoproteins (HDL), particularly the "good" HDL, HDL2 (4).

The reference weights most commonly used as "normal" for these comparisons are the "recommended" weights according to the 1959 Metropolitan Life Insurance Tables (5). A seeming discrepancy is that the 1983 Metropolitan Tables (6) appear to show lowest mortality in people who would be considered 10 or 15 pounds overweight by the 1959 tables. This and similar discrepancies have prompted criticism of the use of height/weight tables to define obesity, and of the conclusion that obesity is harmful. Critics point to data showing that overweight, rather than being harmful, might protect against disease, while being underweight might be a health hazard. The time the obesity is acquired may be important. Mild obesity acquired in mid life or later may not be harmful, but that acquired in early adult life is associated with earlier mortality. A number of studies show increasing mortality when weight is below the slightly pudgy range as well as above it, the so-called "U-shaped curve."

Manson et al. (7) recently reviewed the 25 major prospective studies relating overweight to mortality, and reviewed the three largest studies in detail. In all three it was clear that weight above average carried with it increased total and cardiovascular mortality. The failure of some studies to show increased mortality from obesity is probably accounted for by over-representation of smokers in the thinnest categories, with their predisposition to various diseases, or by occult disease. The latter would lead to earlier mortality than does obesity, which requires a longer lag time between overweight and its consequences than does, for instance, cancer (7).

Upper Segment Obesity: The type of obesity makes a difference in risk. Upper segment obesity, in which the chief adipose mass is in the thorax and upper abdomen, constitutes a greater risk for atherosclerosis than does adipose tissue deposited about the lower abdomen and hips and thighs. The ratio of circumference of the waist to the circumference of the hips has been used to detect upper segment obesity. A waist:hips ratio or greater than 0.8 in women or 1.0 in men has predicted future coronary artery disease in epidemiologic studies (8).

Economic Considerations: A final consideration to the question, "Does obesity matter?, Is it a problem?," is an economic one. A large study of the life-style habits of 15,000 Control Data Corporation employees showed that medical costs of the obese employees was 11 per cent higher than those of the non-obese (9). One can argue that if 26 per cent of the population is obese, and if the national gross product is four trillion dollars, and health care cost to the nation amounts to 10 per cent of the gross national product, the 11 per cent higher medical costs of the obese translates into an annual cost of obesity of about 12 billion dollars. A large share of this cost is now borne by employers in the form of health care benefits. To cope with this growing expense, an increasing number of companies is charging some of the cost to the employees. There is even talk of increasing the employee's share if that employee has unhealthy life-style habits. An obese person might have to pay more than a thin person, but could reduce his premiums and save money by losing weight. Industry, by applying that oldest of incentives, probably invented by the world's first mother, bribery, might succeed in controlling obesity where the medical profession has largely failed.

In spite of the compelling medical and financial reasons for controlling obesity, the treatment of obesity is notoriously unsuccessful. Programs for controlling obesity uniformly experience a very high rate of attrition, and the lost weight is usually regained. The poor record in treating obesity may be due to lack of understanding of its causes. It is still not certain whether the cause of obesity is behavioral or metabolic. The three most prevalent theories of obesity are: 1) Obese people eat more than thin people (gluttony), 2) Obese people exercise less than thin people (sloth), and 3) Some inherited metabolic error makes them fat.

"A study of 540 adopted children in Denmark, where meticulous records are kept of the identity of both natural and adoptive parents, shows an undoubted role of heredity."

Gluttony: Do fat people really eat more than thin people? One approach to this question is to compare the caloric intake of obese and thin people. In a probability sample of the U.S. population, the National Health and Nutrition Examination Survey of 1971-75 (HANES I) (10) participants were meticulously questioned regarding their food intake by trained dietitians and nutritionists. No correlation was found between reported caloric intake and degree of overweight. Other small studies as well as epidemiologic studies have shown the same lack of correlation. Of course, a problem with these studies is that they rely upon subjective reports of food intake. Obese individuals might underreport their food intake. Obese persons are notoriously irregular in their eating habits, going rather regularly from feast to famine and back, making it doubly difficult to establish what they actually eat.

Any consideration of food intake of the obese must take into account the calories needed to transport their greater weight. Excess caloric intake, even if documented, might not be excessive when adjusted for this factor.

If fat people overeat, why? The nature of available food could be in part responsible. When a choice of tasty, high-calorie foods designed to represent a "cafeteria diet" is offered to experimental animals they overeat and become obese. The same may hold true for humans (11). The food industry vigorously promotes such enticing foods. The mechanical ease of eating fiber-depleted diets and the fattening effect of such diets are other factors (12).

Disinhibition: A behavioral characteristic of the obese may be a phenomenon called "disinhibition" by Herman (11). If an obese person has been restraining his/her food intake but has a small indiscretion, the restraint is suddenly released with a resulting food binge. Such behavior is common in other addictive behavior such as alcoholism and deserves attention as an important cognitive aspect of obesity.

Sloth: Are obese persons physically less active than thin persons? Much evidence favors this theory. In a recent study (13), 177 people were observed, one at a time, for 24 hours in a human calorimeter chamber. Such a chamber is a small room equipped to measure caloric intake and output in which the person can move about freely. Activity was monitored by radar. Large differences were found in daily caloric expenditure. Most of the differences were accounted for by spontaneous activity, or "fidgeting." While obese persons were not singled out for attention in this study, it may be that the obese don't fidget as much as thin persons.

In epidemiologic studies a correlation between lack of activity and in-

ceased body weight has been difficult to demonstrate (10). On the other hand, low food intake was found to correlate with obesity, especially in women (14). The logical conclusion was that the obese exercised less. The technological difficulties in ascertaining the day in, day out, physical activity of the obese make definite conclusions still uncertain.

Gortmaker compared degree of obesity in children studied in the National Health Examination Survey (NHES) in 1959 and 1983 (15). He found an alarming increase in childhood obesity between these years. He has hypothesized that the increase was accounted for, at least in part, by increased hours watching television, and thus not exercising. These data are even more alarming because obese childen tend to become obese adolescents, who to some extent become obese adults.

The classical approach of physicians is to urge less food intake. This approach may be misdirected.

Inborn Error of Metabolism: A study of 540 adopted children in Denmark, where meticulous records are kept of the identity of both natural and adoptive parents, shows an undoubted role of heredity. There was a strong correlation between the degree of obesity of adoptees and that of their natural parents. There was no correlation whatever with that of their adoptive parents (16).

If obesity is inherited, what exactly is the nature of the inherited trait?

There are many theories. Two of the most appealing place the blame on the adipose cell itself, or on defective thermogenesis.

Adipose Cell Hyperplasia: Under the influence of early nutritional or other unknown factors, some children develop too many adipose cells. Once deposited, the cells are there for life. Lau et al. (17) have identified a factor released from adipose cell precursors of massively obese persons which stimulates growth of rat adipocyte precursors in tissue culture. Such a factor could account for the increased numbers of cells in massively obese persons.

Adipose Cell Hypertrophy: Some types of obesity, particularly the adult onset type, is caused by increased size of a normal number of existing adipose cells. Enlarged adipose cells are particularly characteristic of upper segment obesity (18) and are associated with a number of risk factors: hypertriglyceridemia, insulin resistance and hyperinsulinemia, and impaired glucose tolerance. Hyperinsulinemia, shown to be a cardiovascular risk factor, may be the link between obesity, hypertriglyceridemia and type 2 diabetes. The excess insulin response is unexplained but may precede obesity and is common to some stage of all types of obesity.

Lipoprotein Lipase (LPL): Adipose cells of the obese may contain too much of the enzyme LPL which facilitates transfer of triglyceride from the circulation into the adipose cell (19,20). The adipose cells of obese persons actually produce more LPL after weight loss, a possible explanation of the all too common rapid regain of lost weight.

"More severely obese persons must await our better understanding of environmental and genetic causes of obesity."

Thermogenesis: The Vermont Prison Study (21) demonstrated that when slender people eat too much they burn off most of the extra calories as heat (thermogenesis) and gain weight with great difficulty. The obese person may lack this adaptation to overeating. The economy of energy as been dubbed "thrifty trait"—calories are stored and not spent. Whether obese persons need fewer calories than expected to maintain weight is still not settled. The availability of sophisticated new techniques may make it possible to answer this question. For instance, several studies utilizing the human calorimetry chamber have shown small differences in the obese which, over time, could lead to large increases in body weight.

More certain is the decreased caloric need of persons who have lost weight. Ravussin, using a calorimeter chamber (22), reported decreased thermogenesis after weight loss. Such studies are of necessity of short duration. Leibel et al. (23) got around the problem of the short duration of such studies by studying a number of persons over many months under strict metabolic ward condition. Careful records were kept of actual caloric intake. They found that obese persons who lost weight required substantially fewer calories to maintain each unit of body weight after weight loss than before; they expended fewer calories per surface area than did never-obese persons even though they weighed considerably more, even after weight reduction, than the lean persons.

An additional problem is the self-defeating effect of repeated cycles of weight reduction, followed by weight regain. In experimental animals, with each cycle there was progressively less weight loss and more rapid weight regain (24). These various bits of evidence suggest that innate factors, rather than aberrant behavior, cause at least some types of obesity.

The story may not be as gloomy as it seems. In a national survey, 27 per cent of men and 46 per cent of women were trying to lose weight (25). If the prevalence of obesity is 26 per cent, then many dieters, particularly women, must be succeeding. Most likely, moderate or mild obesity can be controlled by the individual or will respond to medical or behavioral treatment. More severely obese persons must await our better understanding of environmental and genetic causes of obesity. Meanwhile, a concerted effort by physicians, the media, industry and appropriate branches of the government toward increased exercise and decreased intake of excess calories could do much to reduce premature mortality and morbidity from cardiovascular and other diseases.

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President's Page

"Less than three months remain for us to come up with some meaningful resolutions. The leadership and membership need your input."

Resolutions Revisited

Last October the President's Page addressed the subject of resolutions. Explanation was given concerning the entire process, from start to finish, from the time they are submitted to the hearing stage, open and close, and eventually to its modification, non-adoption or adoption at the final session of the House of Delegates.

As our Annual Meeting is fast approaching, now is the time to give serious consideration to some of the many important issues confronting your medical practice, your hospital, your home, your state or even your country. For the past several years the West Virginia State Medical Association discussed and adopted numerous resolutions concerning a variety of issues affecting the very fabric of our lives. Some of these issues concern seat belts, all-terrain vehicles, AIDS, smoking, a balanced federal budget, compulsory physician military service, nursing shortages, and many others. Whatever the resolution encompasses, I guarantee they receive a great deal of attention. It is the surest way you can send a message to your organization's leadership and membership.

At our last annual convention, the Resolutions Committee and House of Delegates discussed over 30 resolutions. There was a time, however, in the past that the Association received only a few resolutions. At a recent Ohio state medical convention, an Ohio state past president of some years ago said, "It's nice to attend the West Virginia State Medical Association's meeting because they have only two or three resolutions, and that leaves a lot of time for golf." The reply to him was that that's no longer the case, thanks to many counties who now submit resolutions. Let's keep up this recent trend.

To reiterate what was mentioned in the October issue, resolutions in many ways determine the direction our organization takes in the months or even years ahead. The majority of the resolutions submitted do become policy, and many times are carried further to the attention of other organizations or agencies of government, state or federal. Although a resolution sometimes is not approved, it does receive considerable attention, and many times this brings about change.

Less than three months remain for us to come up with some meaningful resolutions. The leadership and membership need your input.

Remember, resolutions must be received by the Executive Director at least two weeks prior to the opening of the Annual Meeting, or August 2.

—Cordell A. De La Pena, M.D.

Challenge Of Public Office

Doctor, why don't you run for public office?

History is replete with physicians who played key roles in American democracy. Several signed the Declaration of Independence and/or Constitution. Others have served with distinction in Congress. Scores of doctors have held state offices in any number of states. Otis Bowen, M.D., currently head of HHS, previously served as Governor of Indiana after service as Speaker of the House.

And as this is written at least three physicans are serving as Representatives in the Washington Legislature, and two more are announced candidates for seats in that state body. On the U.S. House of Representatives level, Jerald R. Schenken, M.D., an Omaha pathologist, is the Republican candidate for his district's seat in eastern Nebraska.

Where, oh where are West Virginia physicians willing to become candidates for seats in our House and Senate? Sure, it's a sacrifice in time and money, but surely there are doctors in the state who have the desire and ability to serve well. Physicians have always been regarded for their wisdom, and their thoughts have been sought on the local level from county commissions to school boards and other activities.

The primaries are past for now. Some physicians might seek a spot on the Republican ticket as an appointee to run for an office where there is no opposition to the democratic candidate if they'd be willing to run in the general election this fall. Otherwise, now is the time to begin preparation for a run at an office in the 1990 primaries.

How many physicians will be on the ballot for the next election?—MGS

What Is A History And Physical Examination In 1988?

By Arthur D. Silk, M.D.

Editor's Note: Reprinted with permission from California Physician, April, 1988.

I don't know about you, but I for one am sick and tired of receiving notices from insurance companies that my patient will not be covered for an EKG, an SMAC-20, or a chest x-ray because the test was not "justified by the diagnosis."

What is a complete history and physical examination? Do we have to redefine this basic clinical discipline with which we all were introduced into clinical medicine in the second year of medical school?

If an orthopedic surgeon contemplating the hospital repair of a fractured femur were to limit the history to "fractured femur" and the physical to "deformed right leg" he or she would be guaranteed to get the chart back from the records room in a hurry. The surgeon is expected to review other than the chief complaint: One must review the cardiac, pulmonary, and GI findings; check the blood pressure; listen to the heart; and usually explore the rectum digitally. Before surgery the physician would be practicing under less than community standards if he or she did not get, usually, a CBC, basic blood chemistry, and an EKG. And none of these efforts is directly related to the fractured femur. The surgeon does them because all physicians have been disciplined from our earliest training to "first do no harm," and that means evaluation of the whole patient.

I have described the clinical exertions of a focused subspecialist. As a primary care physician—a family practitioner or an internist—should I do less?

When a patient comes to me with a headache or a gut ache, a cough or diarrhea, I examine the *whole* patient (unless of course I have done it in the preceding weeks). I do it because my whole professional background has trained me to react this way. The patient with a headache may have cervical cancer; the patient with diarrhea may have heart disease. What are the moral, not to speak of the legal, consequences to the family practitioner or the internist who fails to get an EKG on an ulcer patient if that patient develops an acute myocardial infarction and dies during a subsequent bleeding episode?

Recently the American College of Physicians (ACP) published *Guidelines for Periodic Physical Examinations.* The guidelines recommend that regular examinations begin at age 20 and suggest five-year intervals for a history and physical, a 20-year interval for EKGs, and a

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to the Journal for publication. The author shall be held entirely responsible. Editorials printed in The Journal do not necessarily reflect the official position of the West Virginia State Medical Association.

five-year interval for glucose, cholesterol, and other clinical parameters. But these are intended as preventive medicine guidelines for the presumably well.

Primary care physicians deal far more often with the sick than the well, and five-year gaps in blood sugar and cholesterol and 20-year gaps in electrocardiography in a diabetic are not appropriate.

ACP and the Academy of Family Practice (AFP) must together or individually re-express our traditional belief that the backbone of medicine is diagnosis and that the most essential tool for diagnosis is a thorough history and physical examination. In 1988 a thorough physician examination *a priori* includes certain basic laboratory tests like a CBC, a chem screen panel, an electrocardiogram, and perhaps a Pap smear. Not to do these basic procedures at least periodically in sick people is an economically provoked retreat from the high medical standards that have been demanded of us from medical school on and on which patients should depend.

Just what should be included in a complete physical examination ought to be in the exclusive province of an ethical physician. But in these days of forced frugality, it would cetainly be appropriate for ACP and AFP to reformulate the guidelines of a "complete physical examination" as it was taught to us as interns and residents. Most of us instinctively do the correct procedures now, but published guidelines from a prestigious national organization of physicians would help get the insurance companies' cooperation in good medical practice.

Dr. Silk is a Garden Grove internist and a California Physician Editorial Board member. Copyright 1988.

Our Readers Speak

Photography in Medicine and Surgery

"A picture is worth a thousand words." This statement applies aptly to the present use of photography in the practice of medicine and surgery. A photograph of a lesion, a procedure, an injury, or a syndrome provides education to a student, information to a patient, deposition evidence to a lawyer, and documentation to a physician.

The keys to photography in medicine and surgery are basic knowledge in picture-taking and selection of appropriate camera equipment. Introduction of improved technology of automatic aperture and speed setting, autofocusing and built-in safeguards for inadvertent ruining of a film makes picture-taking easy and effective. Most brands of 35-mm, single-lens cameras are fitted with such features. Transparent slides can be used for teaching, publication, and can be made into prints. They are easy to store in carousel trays or plastic insert mats.

Polaroid pictures are excellent for chart documentation and also can be duplicated and made into transparent slides. They are instant; therefore, they can be shown immediately to patients and their families, students and interested lawyers. Polaroid pictures are stored in plastic insert mats and can be incorporated with the office or hospital charts. The Polaroid Spectra is currently available for medical photography.

Photographs do not replace a concise and precise written documentation of medical records. Their value lies in enhancing medical description, providing visual education, explaining medical information, and serving as evidence to the lawyers and the jury.

Romeo Y. Lim, M.D.
1306 Kanawha Blvd., East
P. O. Box 3107
Charleston, WV 25331

Editor's Note: Doctor Lim has a personal interest in medical education and effective presentation of medical papers in CME programs including audio-visuals. He has addressed these subjects previously in articles published in the *Journal*.

Convention Program Offerings

Mandatory Assignment, Heart Disease

Timothy B. Norbeck

Robert C. Touchon, M.D.

WVSMA convention-goers in August will hear papers on mandatory assignment and heart disease in West Virginia.

Speaking during the Thursday morning, August 18, general scientific session will be Timothy B. Norbeck, Executive Director of the Connecticut State Medical Society, on "Mandatory Assignment and Rising Health Care Costs: A Response to the Critics."

Robert C. Touchon, M.D., of Huntington will address "Heart Disease in West Virginia: A Plan for Prevention and Rehabilitation," during the third general session Saturday morning, August 20. Doctor Touchon is Professor of Medicine and Section Chief of Cardiovascular Medicine at Marshall University School of Medicine.

The WVSMA Annual Meeting is scheduled August 16-21 in White Sulphur Springs at the Greenbrier.

Norbeck, who has been in his present post since 1977, also is Treasurer of Connecticut Medical Management, Inc., which operates the Connecticut Medical Insurance Company. He is immediate past Board Chairman of the American Cancer Society, Connecticut Division.

Norbeck was Executive Director of the Rhode Island Medical Society from 1973-77, and was with the AMA from 1967-1973. Prior to his 21 years of involvement with medicine, he worked for National Steel Corporation in Detroit, Milwaukee and Chicago.

Born in Buffalo, New York, he received his B.A. degree from Hamilton College in Clinton, New York.

Award Recipient

Doctor Touchon also is Chief of Cardiology at the Veterans Administration Medical Center in Huntington.

A recent recipient of the Preventive Cardiology Academic Award from the National Heart, Lung and Blood Institute, he is interested in the prevention of hypertension and hypercholesterolemia in West Virginia. He is Director of Cardiac Rehabilitation at Cabell Huntington Hospital, and is actively involved in risk-factor modification.

Doctor Touchon was graduated from Occidental College in Los Angeles, and received his M.D. degree in 1965 from St. Louis University School of Medicine. He completed postgraduate work at Santa Barbara County (California) General-Cottage Hospital, University of Pennsylvania, and St. Vincent's Hospital and UCLA School of Medicine in Los Angeles.

He came to West Virginia in 1982 after holding posts in Durango, Colorado, and in Anaheim and Fullerton, California.

Doctor Touchon, a Fellow of the American College of Cardiology and the American College of Chest Physicians, was named Clinical Professor of the Year at Marshall for two successive years, 1985-86 and 1986-87.

Convention Schedule

Convention activities will begin with a meeting of the Executive Committee Tuesday afternoon, August 16. Council will meet Wednesday morning and the first session of the House of Delegates will be held that afternoon. Thursday afternoon will be set aside for recreation and golf and tennis tournaments, and meetings of WVSMA sections and specialty societies will be held Friday afternoon.

A luncheon is scheduled Saturday for past presidents of WVSMA, visiting neighboring state presidents and West Virginia 50-year graduate physicians.

The second and final house session will be held Saturday afternoon. As announced earlier, the delegates will be addressed by Dr. James E. Davis of Durham, North Carolina, who will be installed as AMA President this month.

A Presidential reception, hosted by Parker/Hunter Incorporated of Clarksburg, will be held on Wednesday evening, and there will be a reception honoring exhibitors on Thursday evening. On Friday evening, cocktail parties for WVU, Medical College of Virginia and the University of Virginia Alumni will be held from 6:30 to 7:30 P.M.; however, no specific Association-sponsored entertainment event has been planned for Friday evening. The 121st convention will end on Saturday evening with McDonough Caperton Insurance Group sponsoring a reception for outgoing and incoming Association and Auxiliary officers.

Resolutions Deadline

All resolutions prepared for presentation in the WVSMA House of Delegates must be sent to

Executive Director Merwyn G. Scholten at least two weeks before the opening of the Annual Meeting. The deadline for submitting resolutions is August 2.

If submitted later, unanimous consent of the House is required for presentation.

Announced Previously

Speakers and topics announced previously are:

Thursday Morning, August 18—"The Psychosocial Management of the AIDS Patient and Family," Jeffery C. Hutzler, M.D., Program Director of the Outpatient Clinic at the Cleveland Clinic Foundation;

Friday Morning, August 19—"A Defense Attorney's Perspective on Medical Liability," James L. Griffith, J.D., Griffith & Burr, P.C., Philadelphia; and "Sensible Practice of Medicine in a Technologically Oriented Society—Some Call This Ethics," Eugene A. Stead, Jr., M.D., Florence McAlister Professor (Emeritus) of Medicine and Chairman, Department of Medicine, Duke University.

Saturday Morning, August 20—"Cardiovascular Surgery at West Virginia University in 1988," Gordon F. Murray, M.D., Professor and Chairman, WVU Department of Surgery.

Other papers scheduled are "Professional Liability Insurance in West Virginia: Controversial Surgical Procedures" (Friday morning) and "Endoscopic Therapy of Biliary and Pancreatic Disease" (Saturday morning).

Program Committee

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

Annual Meeting Registration

Registration fee for members of the WVSMA for the 1988 Annual Meeting at The Greenbrier August 16-21 is $25 and for non-members/out-of-state physicians, $100. Please make check payable to WVSMA and mail to PO Box 4106, Charleston, WV 25364.

WVSMA Delegation To Attend AMA Meeting

John B. Markey, M.D.

Joseph A. Smith, M.D.

The annual meeting of the American Medical Association's House of Delegates will be held June 26-30 at the Chicago Hilton & Towers Hotel.

Issues expected to be addressed include AIDS, physician reimbursement mechanisms including the new resource-based relative value scale expected this summer, Medicare, medical education, and related scientific reports among others.

WVSMA's three delegates to the AMA House are John B. Markey, M.D., of Charleston, Joseph A. Smith, M.D., of Dunbar, and Harry S. Weeks, Jr., M.D., of Wheeling. Alternate Delegates are David Z. Morgan, M.D., Morgantown; Carl J. Roncaglione, M.D., South Charleston, and Stephen D. Ward, M.D., Wheeling.

Also representing WVSMA will be Cordell A. De La Pena, M.D., President; Charles E. Turner, M.D., Council Chairman, and Bill Atkinson, M.D., President Elect. Stephen Sebert, M.D., Delegate, and David Avery, M.D., Alternate Delegate, will represent WVSMA to the Young Physicians Section meeting.

Dr. Frank J. Holroyd of Princeton, who served for 32 years as a West Virginia AMA Delegate, is Honorary Delegate.

The AMA House is composed of 420 delegates representing state medical associations, national medical specialty societies, residents, medical students, young physicians, medical schools, hospital medical staffs, the armed services, Public Health Service, and Veterans Administration.

Dr. James E. Davis, who will be installed as President during the AMA Annual Meeting, will address the closing section of the WVSMA House of Delegates August 20 during the WVSMA Annual Meeting August 16-20 in White Sulphur Springs at the Greenbrier. Doctor Davis is a surgeon from Durham, North Carolina.

Dr. Albert J. Osbahr of Huntington is a member of the AMA Council on Medical Service.

Executive Director Mert Scholten will provide staff support and services for the WVSMA delegation. Dee Crabtree, Director of the WVSMA Auxiliary, will staff the Auxiliary delegation at its concurrent meeting. Don Sensabaugh, WVSMA legal counsel, will attend a one-day meeting of state medical association legal counselors during the five-day event.

Harry S. Weeks, Jr., M.D.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University

June 3-4, Anesthesia Update '88

CAMC/West Virginia University, Charleston Division

June 4, Interventional Radiology

June 22, Practical Update on Liver Disease

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—June 23

Brownsville, PA, ★ General Hospital, 11 A.M.—June 2, Neurogenic Bladder, Stanley Kandzari, M.D.

June 23, Biliary Tract Disease, Thomas Covey, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—June 9

July 14 (vacation)

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—June 15, Workup & Management of Incontinence in Elderly Patients, Stanley Kandzari, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—June (vacation)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—June 1

July 6, Pediatric Emergency, Carl Holland, M.D., & John Walker, R.N.

Hurricane, • Putnam General Hospital, 9:15 A.M.—June 16, COPD, Mahendra Patel, M.D.

Logan, • General Hospital, 11:30 A.M.—June 17, Update on Hodgkins Disease, Steven Jubelirer, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—June 14, Hand Injuries, Michael Fidler, M.D.

July 12 (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—June 21, General Nutrition Concerns, Cindy Hilovsky, R.D.

Martinsburg, ★ City Hospital, June (vacation)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—June (vacation)

Montgomery, • General Hospital, 12 P.M.—June 1, Allergy Update, Chandra Kumar, M.D.

New Martinsville ★ Wetzel County Hospital, 12 P.M.—June 9, Unstable Angina—New Therapeutic Modalities, David Z. Morgan, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—June 28 (vacation)

July 26 (vacation)

Ripley, • Jackson General Hospital, 12:30 P.M.—June 10, AIDS, Terrie Lee, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—June 23 (vacation)

Spencer, • Roane General Hospital, 12:30 P.M.—June 21, Alcohol & Drug Abuse, Patricia Treharne, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—June 7, Acute MI, Stafford Warren, M.D.

July 5 (vacation)

Uniontown, PA, ★ Uniontown Hospital, June 29, Inflammatory Bowel Disease—Diagnosis & Management, John Shamma'a, M.D.

Waynesburg, PA, ★ Green County Memorial Hospital, 7 P.M.—June 14, Adult Respiratory Distress, Luis Teba, M.D.

June 28, Common E.R. Errors—How to Avoid Them, Fred Blum, M.D.

Welch, ☐ Welch Public Library, 12 P.M.—June 15 (vacation)

July 20 (vacation)

Weston, ★ Stonewall Jackson Hospital, 6 P.M.—June (vacation)

Wheeling, ★ Ohio Valley Medical Center 8 P.M.—June (vacation)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—June 22 (vacation)

July 27 (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library 4 P.M.—June 21, Lupus, Anthony Di Bartolomeo, M.D.

Williamson, ☐Memorial Hospital Cafeteria, 6:30 P.M.—June 2, Skin Tumors, Nolan Parsons, M.D.

July 7 (vacation)

Rocco A. Morabito, M.D., left, of Huntington, President of the West Virginia Urological Society, joins the guest faculty for the Society's annual spring seminar in March in Charleston. From left, standing, are Robert Kay, M.D., Cleveland Clinic, and William F. Tarry, West Virginia University; seated, Casimir F. Firlit, M.D., Ph.D., Northwestern University; Russell W. Steele, M.D., University of Arkansas, and John P. Gearhart, M.D., Johns Hopkins Hospital.

Urologists Discuss Pediatric Urology

"Pediatric Urology" was the topic for the spring seminar of the West Virginia Urological Society in March in Charleston.

Subjects included abdominal masses in infants, neonatal circumcision controversy, hypospadias, new management of reflux, AIDS in pediatrics, pyelogram conference, and a collection of papers presented by urology residents from West Virginia University.

Rocco A. Morabito, M.D., of Huntington, was re-elected to another term as President, Omar El-Bash, M.D., of Huntington was elected Secretary/Treasurer, and William F. Tarry, M.D., Morgantown, President Elect.

Program Accredited At WVU, Charleston

The Pediatric Residency Training Program at the West Virginia University Health Sciences Center/Charleston Division and the Charleston Area Medical Center has received full accreditation, according to a recent notice from the Accreditation Council for Graduate Medical Education. The review Committee, composed of representatives of the American Academy of Pediatrics, the American Board of Pediatrics and the American Medical Association Council on Medical Education, commended the Program Director, James E. McJunkin, M.D., on the steps which have been taken to address previously cited deficiencies.

In making the announcement, Associate Vice President for Health Sciences William O. McMillan, Jr., M.D., also commended Doctor McJunkin for his success. The new Charleston Area Medical Center's Women and Children's Hospital of West Virginia (formerly the Kanawha Valley Division) added considerable impetus in allowing recruitment of needed pediatric subspecialists. Doctor McMillan stated that this demonstrated the merit of the joint effort of CAMC and WVU in providing excellent training facilities and faculty in southern West Virginia.

WVMI Leads Nation In PRO Evaluation

The West Virginia Medical Institute (WVMI) scored the highest of 49 professional review organizations (PROs) in the nation in an evaluation of PROs by the Health Care Financing Administration (HCFA) and confirmed by the United States General Accounting Office.

The PROs were evaluated on a point scale, maximum points of which were 1,000. WVMI was first with 926 points.

PROs contract with the Medicare program to review the necessity, appropriateness, and quality of inpatient hospital services received by the program's beneficiaries. In this study, performed in 1986 but recently released, the HCFA evaluated the PROs' performance under their contracts to determine whether the contracts, awarded for a two-year period, should be renewed on a non-competitive basis or whether competition should be held. As a result of the evaluations, HCFA was requiring competition for about half of the PRO contracts.

Based on concern that the high non-renewal rate indicated problems either with some PROs or with HCFA's management of the program, the Subcommittee on Health, Senate Committee on Finance, requested the GAO assessment of the HCFA's management and evaluation of the PROs.

It was the final recommendation

"That's a terrific idea, Ms. Hargins. In fact, I just thought of it myself."

of GAO that WVMI's contract and 23 others be renewed for 1986-88 while non-renewal was stipulated for 25 of the PROs. WVMI has recently been granted an extension to its 1986-88 contract for 15 months (until September, 1989).

Meanwhile, Dr. Harry S. Weeks, Jr., of Wheeling, WVMI Medical Director, has been invited by the AMA to be a panelist at an AMA workshop for physicians interested in PROs to be held in Richmond, Virginia, June 4.

State Code, Regulations Cover Records Handling

Editor's Note:

Most physicians probably receive at least one request every day to furnish a copy of a patient's records. Many physicians might not understand their full responsibilities in furnishing copies of patient records under state law, and might not realize that they must make available records and other information to the West Virginia Board of Medicine when requested by the Board, under legislative rules and regulations of the Board. Physicians are protected from legal action by patients when they are required to furnish records to the Board. To help clarify these physician responsibilities, printed below are the pertinent sections of the state Code and Regulations.

ARTICLE 29.

HEALTH CARE RECORDS.

§ 16-29-1. Copies of health care records to be furnished to patients.

Any licensed, certified or registered health care provider so licensed, certified or registered under the laws of this state shall, upon the written request of a patient, his authorized agent or authorized representative, within a reasonable time, furnish a copy or summary of the patient's record to the patient, his authorized agent or authorized representative subject to the following exceptions:

(a) In the case of a patient receiving treatment for psychiatric or psychological problems, a summary of the record shall be made available to the patient, his authorized agent or authorized representative following termination of the treatment program.

(b) Nothing in this article shall be construed to require a health care provider responsible for diagnosis, treatment or administering health care services in the case of minors for birth control, prenatal care, drug rehabilitation or related services, or venereal disease according to any provision of the Code, to release patient records of such diagnosis, treatment or provision of health care as aforesaid to a parent or guardian, without prior written consent therefor from the patient, nor shall anything in this article be construed to apply to persons regulated under the provisions of chapter eighteen of this Code or the rules and regulations established thereunder.

(c) The furnishing of a copy or summary of the reports of x-ray examinations, electrocardiograms and other diagnostic procedures shall be deemed to comply with the provisions of this article.

(d) For purposes of this article, "patient record" does not include a provider's office notes.

(e) The provisions of this article may be enforced by a patient, authorized agent or authorized representative, and any health care provider found to be in violation of this article shall pay any attorney fees and costs, including court costs incurred in the course of such enforcement. (1983, c. 101.)

§ 16-29-2 PUBLIC HEALTH

§ 16-29-2. Reasonable expenses to be reimbursed.

The provider shall be reimbursed by the person requesting in writing a copy of such records at the time of delivery for all reasonable expenses incurred in complying with this article. (1983, c. 101.)

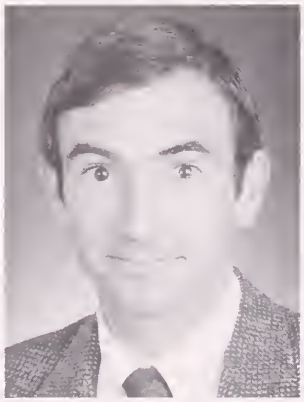
22.18. A physician shall respond within thirty (30) days to a written communication from the Board or its designee and shall make available to the Board any relevant and authorized records with respect to any inquiry or complaint about his professional conduct. The thirty (30) day period shall commence on the date the Board sends the communication by registered or certified mail with return receipt requested to his last known address. Said physician shall maintain a medical record for each patient, which is adequate to enable the licensee to provide proper diagnosis and treatment. Said physician must maintain a patient's medical record for a minimum period of three (3) years from the date of the last patient encounter and in a manner which permits the former patient or a successor physician access to them within the terms of these regulations. Said physician shall provide a patient or, upon a patient's request, another physician or another specifically authorized person, with the following: A summary which includes all relevant data contained in that portion of the patient's medical record which is in said physician's possession, or a copy of the portion of the patient's entire medical record which is in said physicain's possession. It is within said physician's discretion to determine whether to make available a summary or a copy of the entire medical record. Said physician may charge a reasonable fee for the expense of providing this material; however, he may not require prior payment of the charges for the medical services to which such material relates, as a condition for making it available. This regulation does not apply if, in the reasonable exercise of his professional judgment, said physician believes the provision of such material would adversely affect the patient's health. However, in such a case, said physician must make the material available to another responsible person designated by the patient.

AIDS Booklets

Physicians are urged to order for distribution the WVSMA-sponsored AIDS booklets. Some 46,000 booklets are still available at a cost of $15 for a box of 100. More than 47,000 of the booklets have been distributed to school systems, doctors and others.

Contact WVSMA with your order. Telephone 304-925-0342 or 1-800-257-4747.

WVU Charleston Chairman Named



Shawn A. Chillag, M.D.

Logan native Shawn A. Chillag, M.D., succeeds Dr. Warren Point as Chairman of Medicine at the West Virginia University Health Sciences Center/Charleston Division and Director of Medicine at the Charleston Area Medical Center.

Although Dr. Chillag comes to Charleston from the University of South Carolina, where he chaired the Division of General Internal Medicine, he also has clinical roots in West Virginia where he served residencies at both Charleston and Morgantown and as a physician at Guyan Valley (now Logan General) and Elkins Davis Memorial hospitals.

"I'm especially proud of my residency at CAMC and WVU where I was one of three chief residents to serve under Dr. (Edmund B.) Flink during his last year as Chairman of Medicine at Morgantown," Doctor Chillag commented. He also is a Fellow of the American College of Physicians.

Certified by the American Board of Internal Medicine, Doctor Chillag has a special interest in geriatric medicine, an area in which he plans special research and service activities in his new position.

"Returning to West Virginia at primary election time presented me a capsule of current problems and opportunities in our state," he said. "I feel our first responsibility is to determine which health problems we can solve and go after those problems. There's never enough money but plenty to do. I'm delighted to be a part of that effort," he concluded.

Poetry Corner

Precipitation And Consciousness

AUDITORIUM HOSPITAL WINTER

Auditorium hospital winter
Doctor Kay on tape has solved
the Mind-Body Problem and
I'm drifting away away a
spring scene with Jane
meadow green denim blue leather
darkness and distant thunder
these tears this rain

THE PROCESS PROCESS

Today and everyday our thoughts
are raindrops. Patterns of
movement.
Vibrations of brain stuff but not
just the brain. Some of these things
events phenomena these thoughts
some thoughts they extend to the
heart to the groin to the fingers
and toes.
And then they just end they
just end.

Charles R. Joy, M.D.
Erie, Pennsylvania

Advice Through The Years

Under ten, that is when
You can play the whole long day.

From ten to twenty
Now's the time to study plenty.

From twenty to thirty
Find a mate and toil with your
honey
Work, propagate and save
Money.

Thirty to forty
Work, save and study, enjoy family
and home
Lest the mind get too muddy, add
travel and roam.

Forty to fifty
Wisely to spend, ready to work and
pleasure to read
Continue to enjoy and do many a
good deed.

Fifty to sixty
Enjoy relaxation of mind and
activity of body
Play with grandchildren and have
a hot toddy.

Sixty to seventy
Work somewhat less, read
somewhat more
A good motto is work one hour in
four.

Seventy to eighty
Keep active, keep going, this is the
chore
But each successful day will lead
you to more.

Eighty to ninety
Hold each moment as if it were
the last
Watch others and dream of
your past.

L. Walter Fix, M.D.
Martinsburg

We request physician contributions to Poetry Corner.

1989 'Mid-Winter' Date March 17-19

The 1989 Mid-Winter Clinical Conference will be held in Huntington March 17-19 at the Holiday Inn-Huntington-Gateway (Barboursville). The action was taken by the conference Planning Committee May 11 in Charleston as a followup to an earlier Council directive in April that the meeting site be changed from Charleston to Huntington, with a later date than the customary January time slot to be selected for the revised meeting (see April 25 WESGRAM).

The name for the conference will remain the same, at least for 1989. The second annual CME Workshop will be held Friday morning, March 17, preceding the conference. The latter will follow the customary meeting format of Friday afternoon through Sunday morning until noon.

Official Gives AMA Update To Council

Wayne Bradley from AMA headquarters in Chicago briefs Council on AMA accomplishments and services.

AMA legislative strategy teams tracked 59 issues in the last Congress, WVSMA Council was told during its spring meeting in April by an official from AMA headquarters in Chicago.

The above item of information was given during a brief summary of AMA accomplishments and services by Wayne Bradley, Executive Vice President for Health Policy Issues.

Bradley said the AMA has six full-time lobbyists in Washington, DC, and can add five more, if necessary. The AMA monitors constantly 100 key congressional districts in the country, he added.

He said the report on the proposed relative value scale (RVS) for physician services being developed by Harvard University for Congress (with the AMA as a cooperating agency) is due July 14.

The RVS is designed to replace the present Medicare reimbursement system of physicians which he termed "bad." He said the earliest change for the reimbursement system even if RVS is adopted would be 1990 or 1991.

Alluding to the fact that no one else has come up with an alternate method, he asked, "If the change to RVS is not the way, what is?"

Bradley credited the AMA with formulating an AIDS policy which has been "well received," and with getting congressional support to defeat mandatory assignment.

He predicted there will be growing government pressure for quality assurance although there are surveys showing that Americans are satisfied with their medical care.

He said the AMA serves as a physician clearinghouse in which all states now are notified when a physician loses his or her license.

The AMA is the world's largest publisher of specialty information—with publications in nine languages, Bradley told Council.

Residents Wanted For Committee

Are you a resident who would be interested in being a resident member of the Publication Committee for the *Journal?*

Two resident positions on the committee will be open beginning January 1, 1989, and continuing for a two-year period or through December 31, 1990. Residents must be available and in a residency during that time period.

The Publication Committee reviews for acceptance scientific articles submitted to the *Journal* and directs *Journal* production and policy.

Applicants should have writing and editing skills as well as scientific knowledge in their specialties.

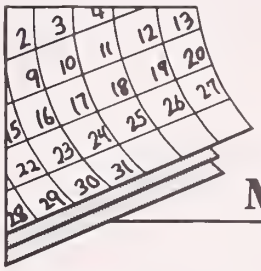
For more information about the procedure for applying for membership on the Committee, contact the *Journal* at 925-0342 or 1-800-257-4747.

Correction

In the May *Journal* article, "The Declining Incidence and Changing Epidemiologic Pattern of Tuberculosis in West Virginia, 1960-1984," the following errors occurred: On pages 178-179, the graphs for Figure 1 and Figure 2 were incorrectly switched. On page 178, bottom of column 2, the following lines were omitted:

decrease (60 per cent). White males and nonwhite females, whose incidence rates are intermediate,

The *Journal* regrets these errors.



Medical Meetings

June

3-7—Am. Urological Assoc., Boston.

7-10—Am. Cancer Society, Cleveland.

11-14—Am. Diabetes Assoc., New Orleans.

22—CNA Second Generation Loss Control Seminar, Huntington.

25—CNA First Generation Loss Control Seminar, Charleston.

26-30—Annual Meeting, AMA House of Delegates, Chicago.

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

10—CNA First Generation Loss Control Seminar, Huntington.

14-16—Am. College of Nutrition, New Orleans.

15-18—Am. College of Nuclear Medicine, Lake Tahoe, Nev.

21—CNA Second Generation Loss Control Seminar, Wheeling.

22-24—Am. Academy of Facial Plastic & Reconstructive Surgey, Washington, DC.

23-30—Am. College of Radiology, Cincinnati.

25-28—Society of Thoracic Surgeons, New Orleans.

25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.

26-29—Am. College of Emergency Physicians, New Orleans.

October

3-6—AAFP, New Orleans.

8-12—Am. Academy of Ophthalmology, Las Vegas.

8-12—Am. Society of Anesthesiologists, San Francisco.

12—CNA Second Generation Loss Control Seminar, Beckley.

13-16—Am. Society of Internal Medicine, Atlanta.

23-26—Medical Group Management Assoc., Kansas City, Mo.

November

6-9—Southern Medical Assoc., New Orleans.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Health Sciences Center News

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Medical Center Changes Name

The WVU Medical Center has changed its name. It will now be known as the Health Sciences Center.

Fewer than 70 centers in the country can be designated health sciences centers. These are composed of a medical school, at least one other health science school and an associated hospital.

John Jones, WVU Vice President for Health Sciences, said the new name better reflects the range of programs offered at the center.

"We have four schools—Dentistry, Medicine, Nursing and Pharmacy—yet the misconception has persisted that we are only a medical school that trains physicians. Our old name probably contributed to that misconception. The fact is, we have some 1,600 students, and only about 330 of them are medical students," Doctor Jones said.

In addition to training physicians, nurses, pharmacists and dentists, the Health Sciences Center offers graduate programs in biochemistry, anatomy, physiology, microbiology, pathology and pharmacology and toxicology, as well as undergraduate programs in dental hygiene, medical technology and physical therapy.

The center includes more than 50 outpatient clinics, and its outreach and continuing education programs touch every community in the state. The center leads the state in health sciences research, and its externally funded research has tripled during the past three years.

The name Health Sciences Center applies both to the physical facility and to the academic unit encompassing the Schools of Dentistry, Medicine, Nursing and Pharmacy.

The immediate occasion for the name change is the approaching opening of new Ruby Memorial Hospital, which will house West Virginia University Hospitals, including Children's Hospital.

"We couldn't call the hospital section that will be vacated the 'Old Hospital.' It needed a name, and we decided it was time for a complete name change," Doctor Jones said.

The Health Sciences Center includes the former University Hospital and the former Basic Sciences Building, both parts of a single building encompassing more than one million square feet.

The former hospital will now be designated Health Sciences South; the former Basic Sciences Building will be Health Sciences North.

The Mary Babb Randolph Cancer Center, now under construction, will be part of the Health Sciences Center. The comprehensive cancer center, a component of the WVU School of Medicine, is scheduled for completion next year.

Ruby Memorial Hospital and Chestnut Ridge Hospital are important to the health sciences education programs; however, both are private and do not receive state dollars. They are staffed by faculty physicians from the center and serve as teaching hospitals with close ties to the Health Sciences Center.

The official name of the center's Charleston Division is the West Virginia University Health Sciences Center/Charleston Division.

WVSMA Leader, Auxilian Honored

A Buckhannon physician of more than 40 years who was instrumental in the development of WVU School of Medicine, and a woman with a lifetime of volunteer service to her alma mater and the community of Morgantown, were among three inducted into the Order of Vandalia May 14.

The ceremony followed the WVU Alumni Association Luncheon in Erickson Alumni Center. The Order is the university's highest award for those who have served their alma mater in an extraordinary manner.

Dr. Jacob C. (Jake) Huffman, a native of Webster Springs, has practiced in Buckhannon since his return from World War II. He was responsible for the referral of the first patient to the new University Hospital in 1960. He served the State Medical Association in key capacities—culminating in its presidency—during the years just prior to the hospital's opening. He was instrumental in paving the way for the passage of the soft drink tax, the income from which made the construction of the Medical Center (now Health Sciences Center) possible.

Nellie Strouss Sleeth, a 1929 graduate and member of Phi Beta Kappa, was a leader in organizing Friends of University Hospital and the Sundale Guild in Morgantown. She served as President of both groups, as well as the State Medical Auxiliary, the Monongalia County Medical Auxiliary, and the Monongalia General Hospital Auxiliary.

With her husband, the late Dr. Clark K. Sleeth, she played a leading role in working with the state's medical community in promoting the establishment of the four-year School of Medicine, with Doctor Sleeth later serving the school as Dean.

The Order of Vandalia was established in 1961. It was named for Vandalia, the proposed 14th colony, which would have included almost all of what today is West Virginia.

This year's inductees bring the number admitted to the Order to 75. Only 32 members are still living.

The third inductee was Ruel E. Foster, an author and retired distinguished professor of English.

1988 SUMMER WEEKEND MEDICAL CONFERENCES

TIMBERLINE FOUR SEASONS RESORT IN CANAAN VALLEY, DAVIS, WEST VIRGINIA

Sponsored By: Temple University School of Medicine.

Director: Frederick A. Reichle, MD, Clinical Professor of Surgery, University of Pennsylvania School of Medicine, Chief Vascular Surgery, Presbyterian-University of Pennsylvania Medical Center.

Assistant Director: Joseph J. Noval, PhD, Senior Research Scientist, Presbyterian-University of Pennsylvania Medical Center.

(9 CME CREDITS FOR EACH TOPIC)

Friday Evening Conferences—7:45 P.M.-9:00 P.M.
Saturday and Sunday Conferences—8:00 A.M.-12:00 Noon

For More Information and Registration Call Kathy Saumure (215) 387-3685

DATES	CONFERENCES & FACULTY
6/10, 6/11, 6/12:	**PHYSICIAN'S NUTRITION & DISEASE PREVENTION** Donna Mueller, PhD, RD, Chairman, Joseph J. Noval, PhD, Frederick A. Reichle, MD, FACS, Frederick S. Herz, BS
6/17, 6/18, 6/19:	**DIAGNOSIS & MANAGEMENT OF THE ISCHEMIC EXTREMITY** Frederick A. Reichle, MD, FACS, Chairman, William H. Rogers, MD, FACS, K. V. Raman, MD, FACS, Joseph J. Noval, PhD
6/24, 6/25, 6/26:	**MEDICO-LEGAL UPDATE** James B. Jordan, Esq., Chairman, Richard L. Douglas, Esq., Frederick A. Reichle, MD, FACS, Joseph J. Noval, PhD, Michael Farrell, Esq.
7/8, 7/9, 7/10:	**STROKE PREVENTION & MANAGEMENT** Frederick A. Reichle, MD, FACS, Charles G. Rob, MD, FRCS, Chairmen, Frederick Nahas, MD, BSEE, Joseph J. Noval, PhD
7/15, 7/16, 7/17:	**IMPOTENCY: DIAGNOSIS & MANAGEMENT** Ralph DePalma, MD, FACS, Chairman, Steven Levine, MD, FAPA
7/22, 7/23, 7/24:	**PULMONARY & THORACIC DISEASES** Lester R. Bryant, MD, ScD, FACS, Chairman, Harry K. Tweel, MD, ACCP, Frederick A. Reichle, MD, FACS
7/29, 7/30, 7/31:	**DIABETES UPDATE** Bertram Channick, MD, FACP, Chairman, Stephen R. Grubb, MD, FACP, Charles R. Shuman, MD, FACP, Allan D. Marks, MD, Victor Adlin, MD, FACP, Frederick A. Reichle, MD, FACS
8/5, 8/6, 8/7:	**VENOUS INSUFFICIENCY OF THE LOWER EXTREMITY** Frederick A. Reichle, MD, FACS, Charles G. Rob, MD, FACS, Chairmen, Richard K. Spence, MD, FACS
68/12, 8/13, 8/14:	**PHYSICIAN UPDATE ON CANCER, AIDS & LIVER DISEASE** Joseph J. Noval, PhD, Chairman, Martin S. Litwin, MD, FACS, Richard S. Schulof, MD, PhD, Frederick A. Reichle, MD, FACS
8/19, 8/20, 8/21:	**ADVANCES IN CARDIOLOGY** Wally S. Hijab, MD, FACP, Chairman, Patrick Brown, MD, FACC, Jack Taylor, Gerald M. Lemole, MD, FACS
8/26, 8/27, 8/28:	**LASERS IN MEDICAL PRACTICE** Ronald Kirschner, DO, FOCOO, Chairman, Samuel Wilson, MD, FACS
9/9, 9/10, 9/11:	**NEW ANTIBIOTICS FOR LIFE THREATENING INFECTIONS** Richard V. McCloskey, MD, FACS, Chairman, Joseph J. Noval, PhD
9/16, 9/17, 9/18:	**INTERVENTIONAL RADIOLOGY** Paul Weiner, MD, Chairman, V. K. Raman, MD, FACS
9/30, 10/1, 10/2:	**ANESTHESIA UPDATE** Leonard Becker, DO and Staff.

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

MU Program Receives Rural Health Award

Calling an MU School of Medicine program "a really unique way of trying to address rural health manpower shortage issues," the National Rural Health Association has given it the Outstanding Rural Health Program Award for 1988.

Dr. John LaCasse, Chairman of the Committee which selected the Combined Residency/Practice Program for the award, said his committee hoped Marshall's program would serve as a model for other medical schools around the nation.

The combined Residency/Practice Program provides physician services in underserved areas while it also provides a unique educational experience for new physicians. It is part of the School's Department of Family and Community Health.

The combined program adapts the traditional postgraduate training residency for new doctors in two ways. First, it allows participants to take time out from their residency to practice medicine for one to three years in an underserved area. Using specially designed courses, it also allows them to earn simultaneously a master's degree in community health.

Set Up for Rural Practice

"Usually in postgraduate education, people go through the typical urban/suburban oriented program, and then those who want to do rural practice adapt to that," said Dr. Robert B. Walker, Chairman of Family and Community Health.

"This program is set up for highly motivated, highly qualified people who want to do rural practice because of its satisfaction and challenges," he said.

Doctor LaCasse praised Marshall's program for its responsiveness to area needs and its close tailoring to the state's rural environment.

"The committee was particularly impressed with the realtionship between the educational program and the rural clinic sites where the school is trying to place people," he said. "One of the strongest features was putting people in practice situations, supporting them while they were out there, and then bringing them back for more education."

The program was begun in 1979 by Dr. David K. Heydinger, now state Health Director, who was Chairman of the Department of Family and Community Health.

Foundation Support

It has been underwritten by the Claude Worthington Benedum Foundation, which has contributed more than half a million dollars to the program. Participants' salaries during the practice years of the program are paid by the communities in which they work.

"The support from the Benedum Foundation has been absolutely vital to the success of this program," said MU President Dale F. Nitzschke. "Not many foundations would have been willing to put their money behind a dramatically new idea at a very young school. Benedum was, and the people of rural West Virginia are the ultimate winners. We deeply appreciate the foundation's support."

President Nitzschke said the program has placed physicians for one to three years in Hamlin, Wayne, Lesage, Rainelle, Barboursville, Spencer, Glenville and Chattaroy. It also has made doctors available to underserved groups in the Huntington area. Right now, physicians in the practice phase of the program are working in Grantsville and Harts.

School of Medicine Dean Lester R. Bryant, M.D., predicted that the need for this program and others like it will grow.

NHS Corps Phasing Out

"Although the National Health Service Corps has been very effective in placing physicians in underserved areas, the federal government is phasing it out," he said. "Unless programs such as ours step in to pull up the slack, the health consequences for rural people will be negative and profound.

"The success of the Combined Residency/Practice Program shows that we don't have to resign ourselves to a severely limited supply of medical care," he said. "We believe that already this program has accounted for more years of physician service in underserved areas of West Virginia than any program besides the National Health Service Corps."

Brain Response Grant Received

Sasha Zill, Ph.D., Assistant Professor of Anatomy, has received a $15,600 grant to study how the brain responds to messages from certain sensory receptors in the joints, research which could ultimately help scientists better understand movement and the diseases which impair it.

The funding is part of a Whitehall Foundation grant which runs through 1989 and is expected to total more than $33,000.

Through his work with grasshoppers, Zill seeks to answer neurobiological questions in the areas of sensory feedback and motor control. With grants from the Whitehall Foundation and the National Institute of Health, he has been examining the roles of sensory feedback in the generation of motor patterns and the mechanisms of processing sensory inputs by the central nervous system.

THE WHEELING CLINIC

WHEELING, WEST VIRGINIA 26003

JAMES B. HAZLETT, Executive Director

Wheeling, 234-2000 • St. Clairsville, 695-2511 • New Martinsville area, 455-4588 • Wellsburg-Steubenville area, 527-1230

INTERNAL MEDICINE

General
B. L. VanPelt, M. D.
P. R. Hedges, M. D.
R. N. Lewis, M. D. (St. Clairsville)
R. D. Morris, D. O. (New Martinsville)
C. McCool, M. D. (St. Clairsville)

Peripheral Vascular Disease
J. D. Holloway, M. D.

Cardiovascular
A. M. Valentine, M. D.
W. E. Noble, M. D.

Gastroenterology
T. E. Chvasta, M. D.
L. R. Cain, M. D.

Hematology/Oncology
C. A. Vasquez, M. D.

Nephrology Associates, Inc.

Pulmonary
T. V. Burke, M. D.

Rheumatology
M. A. Stevens, M. D.

GENERAL SURGERY
E. C. Voss, M. D.
J. H. Mahan, M. D. (St. Clairsville)
R. L. Cross, M. D. (Martins Ferry)

THORACIC AND CARDIOVASCULAR SURGERY
H. Shackelford, M. D.

ORTHOPEDICS
E. L. Barrett, M. D.
R. S. Glass, M. D.

UROLOGY
D. C. Trapp, M. D.
B. M. McCuskey, M. D.

GYNECOLOGY
R. W. Leibold, M. D.
R. T. Brandfass, M. D.

OBSTETRICS & GYNECOLOGY
T. A. Athari, M. D.
J. W. Campbell, M. D.
C. V. Porter, M. D.

OPHTHALMOLOGY
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangillnan, M. D.
C. G. Kirby, M. D.

OTOLARYNGOLOGY/ MAXILLO-FACIAL SURGERY
W. A. Tiu, M. D.
A. G. Matadar, M. D.

RADIOLOGY
Valley Radiologists, Inc.

FAMILY PRACTICE
R. A. Porterfield, M. D. (St. Clairsville)
G. L. Cholak, M. D. (St. Clairsville)
E. L. Coffield, M. D. (Martinsville)
J. D. Smith, D. O. (Wheeling)

DERMATOLOHY
M. Baron, M.D.

NEUROLOGY
H. L. Kettler, M. D.
S. G. Christopher, M. D.
W. Zyznewsky, M. D.
S. Govindan, M. D.

Neuropathology
S. Govindan, M. D.

PSYCHIATRY
S. D. Ward, M. D.
D. H. Smith, M. D.
D. P. Hill, M. D.

ANCILLARY SERVICES
Optical
Speech Therapy/Audiology
Counseling/Group Therapy
Biofeedback Laboratory
Electrology/Cosmetic Therapy
Electrocardiography
Electroencephalography
Neurological Studies (Non-Invasive)
Roentgenology
Pulmonary Diagnostics Lab
Nutrition Therapy
24° A/EEG Scanning Service

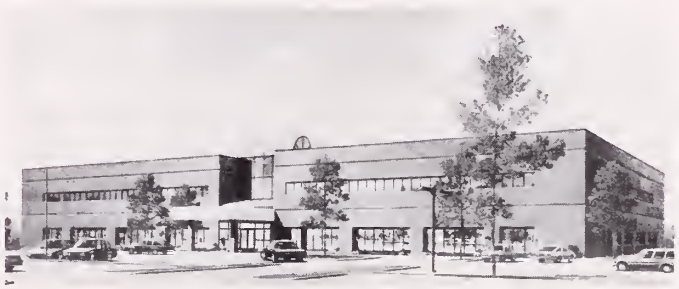
Chestnut Ridge Hospital brings psychiatric health care closer to home.

Chestnut Ridge Hospital, a 70-bed private psychiatric hospital located on the campus of the West Virginia University Medical Center, offers comprehensive inpatient and outpatient psychiatric and chemical dependency services for children, adolescents and adults.

Staffed by the Department of Behavioral Medicine and Psychiatry of the West Virginia University School of Medicine, Chestnut Ridge offers four core treatment programs:

- Adolescent psychiatric treatment
- Adult psychiatric treatment
- Chemical dependency rehabilitation
- Detoxification and intensive/acute care

In addition, Chestnut Ridge offers specialized services and clinics such as neuropsychological testing, chronic pain rehabilitation and eating disorders management.



Chestnut Ridge Hospital

(304) 293-4000

930 Chestnut Ridge Road
Morgantown, WV 26505

WESPAC Members

Printed below are 1988 WESPAC members reported to the *Journal* as this issue went to press. Additional new WESPAC members will be reported next month. Sustaining members are indicated by an asterisk. The Journal attempts to report WESPAC membership as accurately as possible.

Boone
Robert B. Atkins
Ron D. Stollings*

Brooke
Patsy Cipoletti

Cabell
Ijaz Ahmad
Lester R. Bryant
David Cook
Robert Dennison*
Hans Werner Dransfeld
R. Lawrence Dunworth
Gary Gilbert*
Thomas Gushurst
William Mason Jennings, III
Allen Kayser
Subrat K. Lahiry
Robert W. Lowe*
Joye A. Martin
G. O. McClellan
Richard McWhorter*
W. W. Mills
Rocco Morabito*
H. S. Mullens
Mysore Narayan
William Neal
Dennis O'Connor*
Gilbert A. Ratcliff
Hossein Sakhai*
Mabel M. Stevenson*
Marc A. Subik
Gary Tolley*
Joseph B. Touma
Charles Turner*
Deleno Webb

Central
Luis A. Almase
J. E. Echols*
Arnold F. Gruspe*
J. C. Huffman
Earl L. Fisher*
Charles T. Lively
John A. Mathias
Rigoberto Ramirez*
Joseph B. Reed
Frank A. Scattaregia
Joseph A. Snead*
Eusebio Villanueva

Eastern Panhandle
Edward Arnett
Romulo Estigoy
D. Ewell Hendricks
Rudolf Lemperg*
Ed Quarantillo
Michael Strider
Vigilio Tan
Greenbrier Valley
Douglas Jones*
Robert Modlin
Stephen Sebert
George R. Thompson
Haven Wall, Jr.*

Hancock
Lubin Alimario
Antonio Licata*
Dominic A. Macedonia*
Gurdey Purewal
J. L. Thompson*

Harrison
Gaspar Barcinas
James Bryant*
T. H. Chang*
Cordell A. De La Pena*
Erlinda De La Pena*
Julian D. Gasataya*
Mehmet Kalaycioglu*
Joseph Kassis
L. R. Lapointe
Charles Lefebure*
Hank Markowtiz*
Teodoro Medina*
Catalino Mendoza*
L. H. Mills
Francis O'Connor
Doyle Sickles
Mounir Shazly
Lynwood D. Zinn

Kanawha
David Abramowitz
L. S. Agrawal
Enrique Aguilar
Alfonso Amores*
Constantino Amores
Mohammed Boustany
Richard Capito
William H. Carter
Nicholas Cassis, Jr.
Stephen P. Cassis
Fortunato Castro
Jean P. Cavender
Jerill D. Cavender
James Caudill*
Jacques Charbonniez
Ronald E. Cordell
William Crigger
Glenn Crotty*
Jan H. Cunningham*
W. Alva Deardorff
Cecilio V. Delgra*
Thomas R. Douglass*
W. Edward Duling
Jerry Edens*
Donald Farmer*
Joseph E. Fernandes
Michael O. Fidler
P.F. Francke*
Paul F. Fulcher*
Robert Ghiz*
Rosalino Lee Go
David Gray*
Roland Hamrick
Michael G. Holland
Fred Holt*
Ramakrishnan Iyer*
S. R. Jawalekar*
Sriramloo Kesari*
James W. Kessel*
Jamal H. Khan*
M. Zafrullah Khan
Robert Kusminsky*
C. W. Kim
Chandra Kumar
James Lane
Alberto Lee
Hans Lee*
Johnsey Leef, Jr.*
Sidney Lerfald
Rogelio T. Lim*
Romeo Y. Lim
J. L. Mangus
Ahmad Marikayer
John B. Markey
Lewis H. McConnell
Brittain McJunkin
Stephen K. Milroy
Barbara Morgan
William C Morgan, Jr.*
Prasadarao B. Mukkamala*
Lionel J. Nair
Mickey Neal*
Lee Neilan
Thompson Embelton Pearcy
Abelard Pelaez
Warren Point
Thomas Poland
Augusto Portillo
Designu Raja
Arunthathie Rajaratnam
Ramakrishnan*
Richard Rashid*
Carl J. Roncaglione*
Ujjal Singh Sandhu*
Chul Seong
Arvindkumar Shah*
Ned T. Shanmugham
Richard Sibley
Joseph A. Smith*
Ralph Smith*
Horatio A. Spector*
James T. Spencer*
James L. Steele
Samuel Strickland
Donald F. Teter
Edward Tiley
Herbert A. Tipler*
Alfredo Velasquez*
P. L. Verma
Martin Wershba
Robert T. Westmoreland
Edward Wheatley*
A. Don Wolff*
George L. Zaldivar

Logan
Judith Brendemuehl
Harry Fortner
Ray M. Kessel
Rajiv Khanna
K. Kitiphongspattana
Noor Loynab
Boppana Rao*
Raymond Rushden
Rodney Stephens
Narciso Tuanquin

Marion
Douglas Burnette
E. G. Cadogan
Gunther Frey
John A. Rizzo
Mohammad Roidad*
Mary Jordan Smith
Tom Turner

Marshall
Kenneth Allen
M. F. Anwar
Frank S. French*
Jesus T. Ho

McDowell
Muthusami Kuppusami*

Mercer
Edward Aycoth
Anil Agarwal
Afzal Ahmed
David Bell*
Larry Carson*
Yogesh Chand
G. D. Duremdes*
T. Keith Edwards*
John J. Mahood
Albert Paine
Thomas J. Park
K. S. Pathak
Charles Pruett
Jerry Wang

Mingo
Pastor C. Gomez

Monongalia
Roger Abrahams
Ernest Bonitatibus
Walter Bonney, Jr.*
Paul Clausell
Lionel H. Demontigny
Steven Diehl
Edmund B. Flink
A. Ghosal*

C. Andrew Heiskell*
Nabil Jabbour
Richard Kerr*
Roger E. King*
Michael J. Lewis*
Gary D. Marano*
David Z. Morgan*
David Myerberg
Antonio Palladino
Jeffrey A. Stead
William F. Tarry*
George W. Weinstein

Ohio
Robert B. Altmeyer*
Michael Blatt
George E. Bontos
David A. Bowman*
C. David Burkland
Larry Cain
Leonidas Castro
Robert A. Caveney
Thomas Dickey
Larry A. Dodd
Terry Elliott*
Donald Hofreuter
Ahmed H. Kalla
John W. Kennard*
Carl J. Kite*
Derrick Latos*
Robert A. Lewine
Christopher Marquart
Howard Neiberg
Thomas M. Przybysz
Gurijala Reddy
Martin Reiter
Thomas Romano*
Alan Ruben
Harold Saferstein
Charles Staab, III
John Stiller*
Richard F. Terry
Sam Vukelich
Stephen D. Ward*
H. H. Wang
Harry Weeks*
Robert R. Weiler
Jeffrey M. Yost

Parkersburg Academy
Harry Amsbary
Bill Atkinson*
David W. Avery*
Loretto R. Auvil
James Dauphin*
Eric David
William Gilmore
Richard Hamilton*
Frank A. Huber*
Ghassan Khalil
Paul Kupferberg
Daniel Lundblad
Gary W. Miller
Michael Morehead*
Vutla Prasad
Jorge Prieto
Alfred Prieto
Robert Rudolph*
Michael A. Santer
Frank Schwartz
R. C. Sims*
Harry Shannon*
Benjamin Sol
Adam Toppercer
A. E. Twite
P. L. Wiebe

Potomac Valley
Carl Liebig

Preston
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Obituaries

ELDEN H. PERTZ, M.D.

Dr. Elden H. Pertz, retired Weston surgeon, died at his home March 19. He was 64.

Doctor Pertz began practice in Weston in 1953. He was on the staff of the old Weston Hospital and later was prominent in efforts to build the new Stonewall Jackson Memorial Hospital which he served as President, Chief of Staff, and member of the Board of Directors. At the time of his retirement in 1986 he established an educational endowment fund at the hospital.

Born in Weston, he was graduated from West Virginia Wesleyan College, and received his M.D. degree in 1947 from the University of Maryland. He interned and completed his residency in surgery at Mercy Hospital in Baltimore.

Doctor Pertz was Chief of Surgery at the Naval Hospital, Donaldson Air Force Base, Greenville, South Carolina, in 1951-53.

He was certified by the American Board of Surgery, and was a Fellow of the American College of Surgeons.

Doctor Pertz was an honorary member of the Central West Virginia Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Alyce Jarvis Pertz; two daughters, Mrs. Ronald Henry and Mrs. Joseph Walker, both of Weston; a son, John E. Pertz of St. Petersburg, Florida; and three brothers, Gary N. Pertz, Earlo R. Pertz and J. Edwin Pertz, all of Weston.

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The following physicians and students were welcomed in April as new members of the West Virginia State Medical Association:

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David T. Vega, M.D., United Hospital Center, #3 Hospital Plaza, Clarksburg 26301, Radiation Oncology

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Frank C. Gyimesi, M.D., 4 Hospital Plaza, Suite 202, Clarksburg 26301, Obstetrics/Gynecology

Ernest E. Hodge, M.D., Suite 403, 415 Morris Street, Charleston 25301, Urology/Renal Transplantation

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Charito M. De La Torre, M.D., PO Box 179, Man 25635, Pediatrics/General Practice

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John T. Bell, M.D., 1 Physicians Plaza, Fairmont General Hospital, Fairmont 26554, Ophthalmology

Mercer

Dennis M. Montenegro, M.D., 330 South Walker Street, Princeton 24740, General Practice

Guia M. Montenegro, M.D., 21 Crestview Drive, Princeton 24740

Uma M. P. Rao, M.D., 105½ Wallace Street, Apartment 2, Princeton 24740, Physical Medicine

Mingo

Armando M. Acosta, M.D., 181 Nighbert Avenue, Logan 25601, Internal Medicine/Emergency Medicine

Manuel M. Angco, M.D., PO Box 2199, Williamson 25661, General Practice

Magdi Z. Fahmy, M.D., PO Box 299, Turkey Creek, KY 41570, Anesthesiology/General Practice

Ohio

Charles G. Kirby, M.D., 58 16th Street, Wheeling 26003, Ophthalmology

Jeffrey Smith, D.O., 2010 Warwood Avenue, Wheeling 26003, Osteopath

Raleigh

Cee Ann Davis, M.D., Rural Acres Clinic, PO Box 428, Sprague 25926, Obstetrics/Gynecology

Patrick J. Forte, M.D., 1007 S. Oakwood Avenue, Beckley 25801, Anesthesiology

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Sarah S. Goswami, M.D., 122 Pinnell Street, Ripley 25271, Obstetrics/Gynecology

Resident

Robert Devrnja, M.D., PO Box 550292, Birmingham, AL 35255

Students

Mary Ann Chiodo, 1304 Pineview Drive, Morgantown 26505

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†**Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

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A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

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BRIEF SUMMARY
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INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri,** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

SPECIAL SENSES *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%)

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%)

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%)

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CONVENIENT *B.I.D.*™ DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
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Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg *B.I.D.*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D.*
	Severe/Complicated	500 mg *B.I.D.*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.I.D.*

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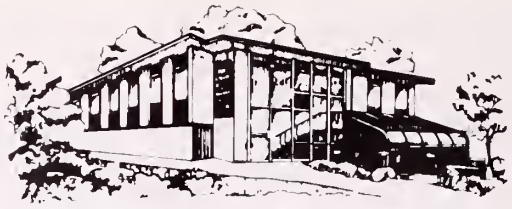

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Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGDT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGDT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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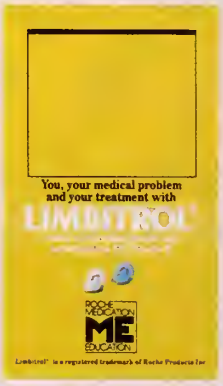

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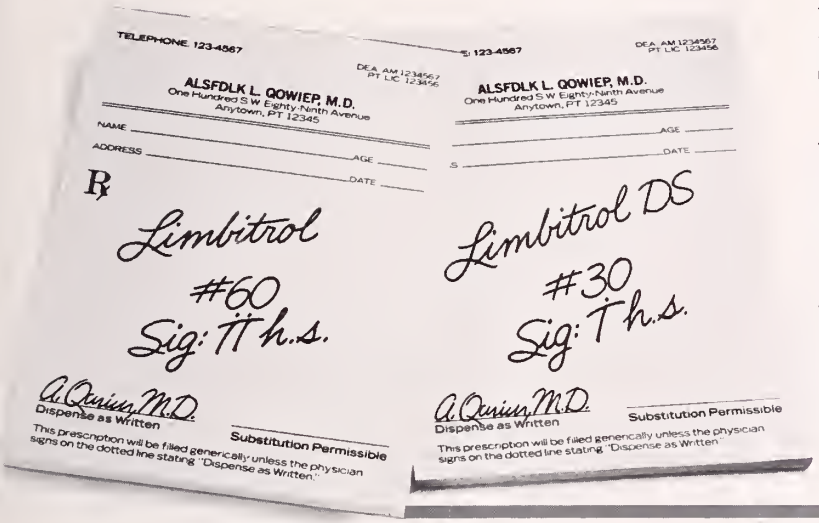

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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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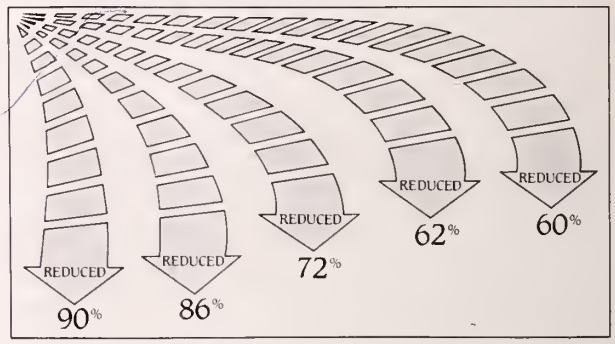

*Patients often presented with more than one somatic symptom.

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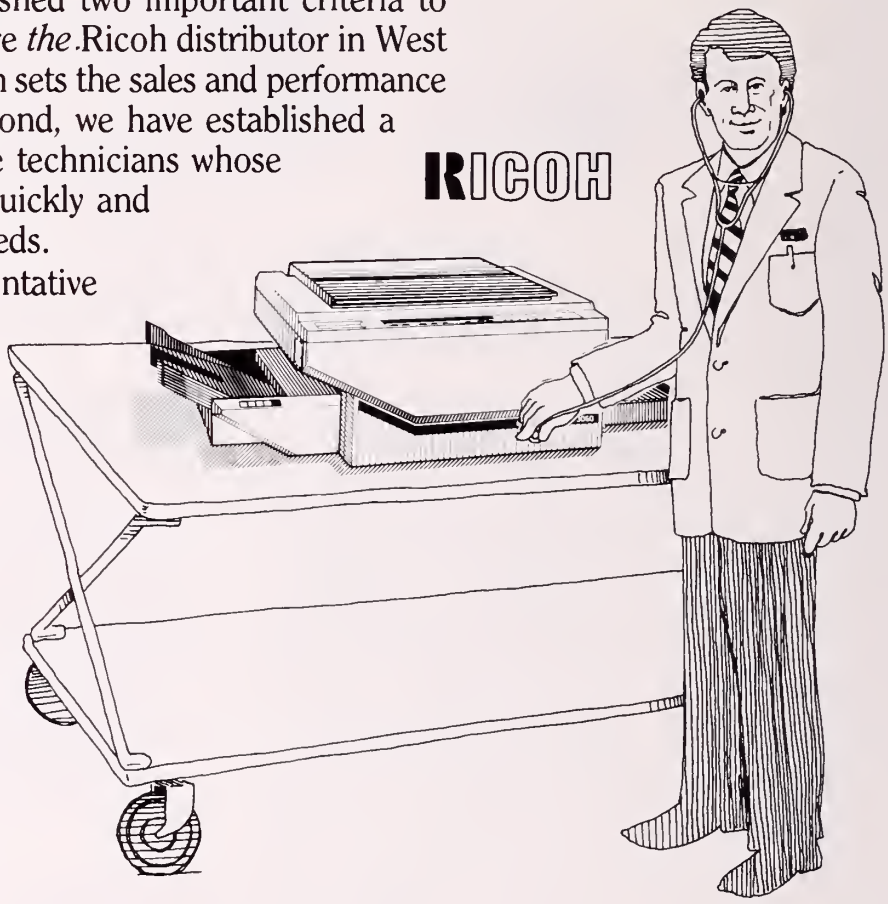

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C I B A

References: 1. Data on file. CIBA Pharmaceutical Company. 2. Skoutakis VA, Acchiardo SR, Wojciechowski NJ, et al. Liquid and solid potassium chloride: Bioavailability and safety. *Pharmacotherapy* 1980;4(6):392-397. 3. Skoutakis VA, Carter CA, Acchiardo SR. Therapeutic assessment of Slow-K and K-Tab potassium chloride formulations in hypertensive patients treated with thiazide diuretics. *Drug Intell Clin Pharm* 1987;21:436-440.

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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis; in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.
2. For prevention of potassium depletion when the dietary intake of potassium is inadequate in the following conditions: patients receiving digitalis and diuretics for congestive heart failure; hepatic cirrhosis with ascites; states of aldosterone excess with normal renal function; potassium-losing nephropathy; and certain diarrheal states.
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS
Potassium supplements are contraindicated in patients with hyperkalemia, since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene) (see OVERDOSAGE).

All solid dosage forms of potassium supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation. Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to an enlarged left atrium.

WARNINGS
Hyperkalemia (See OVERDOSAGE)
In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic.

The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction With Potassium-Sparing Diuretics
Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene), since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions
Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage, or perforation. Slow-K is a wax-matrix tablet formulated to provide a controlled rate of release of potassium chloride and thus to minimize the possibility of a high local concentration of potassium ion near the bowel wall. While the reported frequency of small-bowel lesions is much less with wax-matrix tablets (less than one per 100,000 patient-years) than with enteric-coated potassium chloride tablets (40-50 per 100,000 patient-years) cases associated with wax-matrix tablets have been reported both in foreign countries and in the United States. In addition, perhaps because the wax-matrix preparations are not enteric-coated and release potassium in the stomach, there have been reports of upper gastrointestinal bleeding associated with these products. The total number of gastrointestinal lesions remains approximately one per 100,000 patient-years. Slow-K should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis
Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, or potassium acetate.

PRECAUTIONS
General:
The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis *per se* can produce hypokalemia in the absence of a deficit in total body potassium, while acute acidosis *per se* can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium.

Information for Patients
Physicians should consider reminding the patient of the following:
To take each dose without crushing, chewing, or sucking the tablets.
To take this medicine only as directed. This is especially important if the patient is also taking both diuretics and digitalis preparations.
To check with the physician if there is trouble swallowing tablets or if the tablets seem to stick in the throat.
To check with the doctor at once if tarry stools or other evidence of gastrointestinal bleeding is noticed.

Laboratory Tests
Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions
Potassium-sparing diuretics: see WARNINGS.

Carcinogenesis, Mutagenesis, Impairment of Fertility
Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C
Animal reproduction studies have not been conducted with Slow-K. It is also not known whether Slow-K can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Slow-K should be given to a pregnant woman only if clearly needed.

Nursing Mothers
The normal potassium ion content of human milk is about 13 mEq/L. It is not known if Slow-K has an effect on this content. Caution should be exercised when Slow-K is administered to a nursing woman.

Pediatric Use
Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
One of the most severe adverse effects is hyperkalemia (see CONTRAINDICATIONS, WARNINGS, and OVERDOSAGE). There also have been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see CONTRAINDICATIONS and WARNINGS); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE
The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see CONTRAINDICATIONS and WARNINGS). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration (6.5-8.0 mEq/L) and characteristic electrocardiographic changes (peaking of T waves, loss of P wave, depression of S-T segment, and prolongation of the Q-T interval). Late manifestations include muscle paralysis and cardiovascular collapse from cardiac arrest (9-12 mEq/L).

Treatment measures for hyperkalemia include the following: (1) elimination of foods and medications containing potassium and of potassium-sparing diuretics, (2) intravenous administration of 300-500 ml/hr of 10% dextrose solution containing 10-20 units of insulin per 1,000 ml; (3) correction of acidosis, if present, with intravenous sodium bicarbonate; (4) use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

DOSAGE AND ADMINISTRATION
The usual dietary intake of potassium by the average adult is 40-80 mEq per day. Potassium depletion sufficient to cause hypokalemia usually requires the loss of 200 or more mEq of potassium from the total body store. Dosage must be adjusted to the individual needs of each patient but is typically in the range of 20 mEq per day for the prevention of hypokalemia to 40-100 mEq or more per day for the treatment of potassium depletion. Large numbers of tablets should be given in divided doses.

Note: Slow-K slow-release tablets must be swallowed whole and never crushed, chewed, or sucked.

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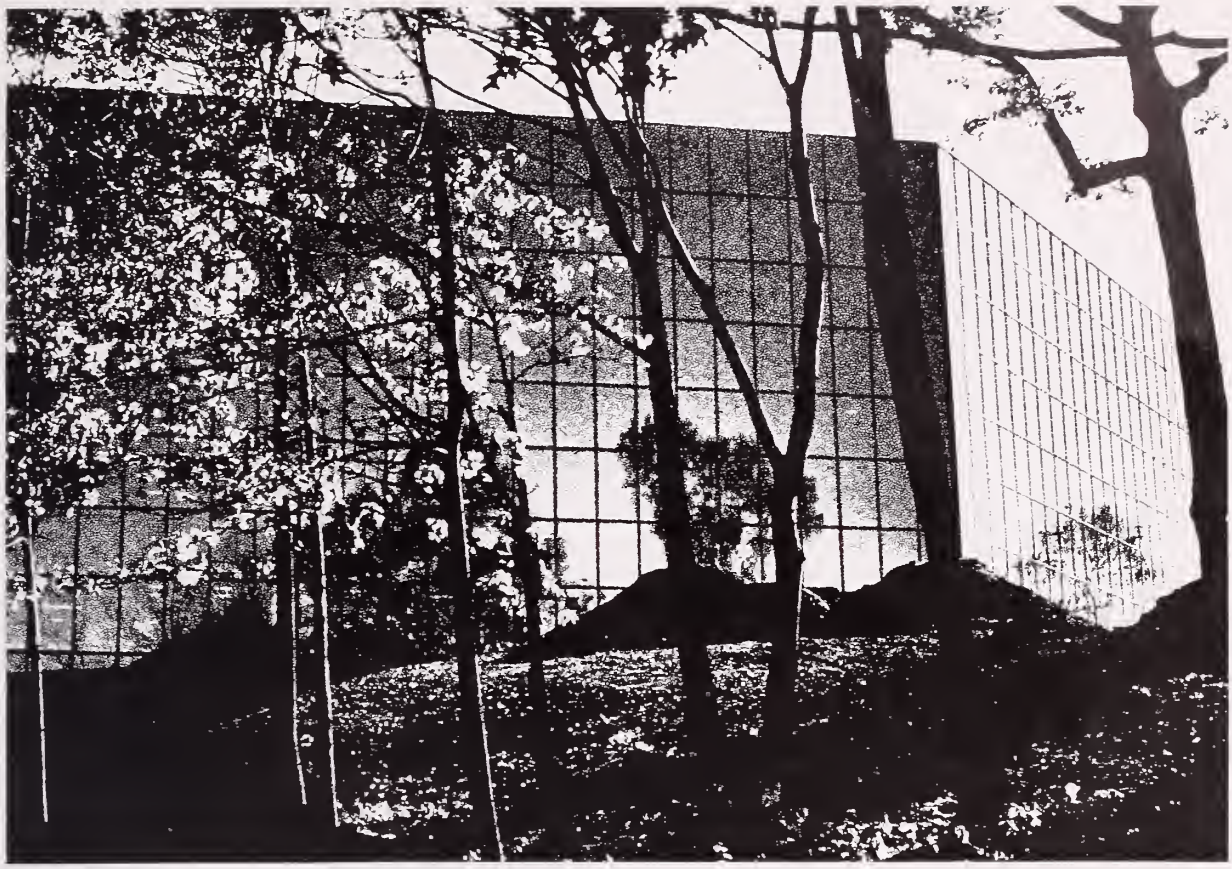

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In Interscholastic Football

Common Injury Evaluation And Rehabilitation Deficiencies

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The records of 221 incoming freshman football players at Glenville State College for the five-year period from 1981-1985 were reviewed retrospectively with paticular attention paid to knee, neck and concussion injuries in an attempt to analyze the quality of health care provided to the high school student athlete. The results showed that 67 per cent of those suffering neck injuries received less than optimal initial treatment and followup, and that there was incomplete diagnosis and/or improper rehabilitation in 37 per cent of those who incurred major knee injuries. Brain concussions were managed more effectively, with only 13 per cent of those athletes considered to be at high risk for further participation in football. It can be concluded from these data that a high index of suspicion must be maintained when evaluating injuries to the neck and knee in the high school athlete.

Introduction

Safety considerations for participation in interscholastic football have always enjoyed a high priority in the delivery of health care for the student athlete. Coaching techniques have been modified in the recent past in hopes of decreasing the potential for serious injuries, and several rules changes have been implemented to decrease injury rates. These changes have been supported enthusiastically by all those concerned with the health care of the student athlete. Statistical analysis has revealed dramatic improvement in the incidence of serious and catastrophic high school football injuries (1-4).

The injured high school athlete should be evaluated expediently by a team of health care professionals, with emphasis on accurate diagnosis and skilled rehabilitation. Team physicians are responsible for designing an efficient screening process for the multitude of injuries occurring in a typical fall season, and they must provide close supervision of the health care team including staff athletic trainers and therapists involved in the initial evaluation and rehabilitation process. In an attempt to analyze stastically the quality of existing health care supervision of the high school football athlete, patterns of injury evaluation and management were reviewed in detail for all football candidates entering Glenville (West Virginia) State College, an NAIA Division I institution.

> ***"These results point to a need for accurate diagnosis at the time of injury, and for clear guidelines for returning the athlete to action post-injury based on sound rehabilitation principles."***

Materials and Methods

The records of 221 college freshmen receiving pre-season football physical examinations at the College for the five-year period from 1981-1985 were reviewed retrospectively. A medical history form was filled out by the athlete. The physical examination form and the athletes' responses to physicians' questions were examined in detail to reveal previously improperly diagnosed conditions as well as cases demonstrating incomplete rehabilitation. Because of their relatively high incidence as well as the potential for long-term sequelae, special emphasis was given to knee, neck and concussion injuries, with additional historical elements obtained from each student athlete by a single physician interviewer.

Geographic and Anatomical Distribution

One hundred twenty-four of the student athletes in the study (56 per cent) participated in interscholastic football in the state of West Virginia while the remaining out-of-state athletes (44 per cent) were concentrated in the Washington, D.C., metropolitan area (nine per cent), the Akron, Ohio, area (seven per cent), and in southwestern Pennsylvania (six per cent).

Injury patterns in respect to body parts affected in this heterogenous group of athletes paralleled other studies, with ankle injuries (37 per cent) reported with the greatest frequency (5-7). Twenty-six per cent of the group reported sustaining knee injuries, while back injuries occurred in 14 per cent. Other common injuries included brain concussions (14 per cent), joint dislocations (11 per cent), and neck injuries (eight per cent). In an attempt to determine possible deficiencies in the diagnosis and initial rehabilitation of the injuries reported,

historical features of each injury were compared with findings on pre-season physical examinations. Further discussion is limited to three specific areas: knee injuries, neck injuries and brain concussions.

Knee Injuries

Knee injuries occurred in 57 athletes during pre-college competition. Thirty of the injuries (53 per cent) were found to be minor knee sprains with no residual abnormalities uncovered by standard orthopedic testing when the athletes report for their pre-competition examination (Figure 1). Of the remaining 27 major knee injuries, 12 required surgery prior to entering college: seven menisectomies, three collateral ligament repairs, and two combined collateral and cruciate ligament repair. This shows a surgery rate from knee injuries of 21 per cent (12 surgeries in 57 reported injuries) which is very similar to that seen in other studies (8).

Incorrect diagnosis with subsequent incomplete rehabilitation was suggested in five of the athletes with high school injuries. Three had reported "minor" sprains which were treated conservatively, but at the time of pre-season examinations demonstrated ligamentous laxity and rotatory instability. Another athlete sustained a traumatic knee injury as a junior in high school, and demonstrated a posterior cruciate deficient knee at the time he presented for his college examination. This athlete reported playing *all* games his senior season in high school despite a chronically "sore" knee without any protective bracing. A fifth freshman reported a "minor" sprain occurring the week before a post-season contest and was found to have a marked second-degree laxity of the medial collateral ligament on pre-season examination. This athlete was allowed, and reportedly encouraged, to participate in his state's all-star contest only five days following the initial injury.

In five additional athletes with high school knee injuries, incompetent rehabilitation despite accurate diagnosis was suggested by the findings of residual laxity and marked quadriceps weakness by isokinetic testing. Those findings demonstrated that 37 per cent of the major knee injuries reviewed (10 of 27) could have been managed with better results had aggressive diagnosis and rehabilitation services been available at the high school involved.

"... 37 per cent of the major knee injuries reviewed ... could have been managed with better results had aggressive diagnosis and rehabilitation services been available ..."

Neck Injuries

When evaluating treatment patterns for our group of 17 neck injuries, the following historical information regarding their care was reviewed: 1) Were you initially seen by a physician? 2) Was an x-ray examination performed? 3) Were you given a rehabilitation program for neck strengthening? 4) Were you seen in followup by a physician? 5) How many weeks of contact were missed after your injury?, and 6) Did you have a repeat injury to your neck? (Table). Realizing that a high index of suspicion is desirable in dealing with this potentially catastrophic problem, any athlete listing negative responses to more than one of the first four questions was categorized as having had suboptimal management. Of those reporting neck injuries, 67 per cent were found in this group. This coincides with an earlier study by Gerberich and associates at the University of Minnesota (9) in which 70 per cent of the players with neck and/or back pain indicated that they personally were responsible for the decision to return to play the same day, with physicians and athletic trainers each responsible for the decision in only three per cent of the cases.

Most of our group of athletes (73 per cent) reported being seen initially by physicians who ordered x-rays; however, a rehabilitation program was initiated in only 40 per cent of these athletes. This is an alarming finding in view of the wealth of information available on the need for a neck strengthening program for injury rehabilitation and prevention (1, 10-13). In one case example, a junior defensive back sustained a neck injury resulting in the loss of sensation in all four extremities. Sensation returned while being transported to the hospital in the ambulance, and x-ray examination that evening was reportedly negative. The athlete returned to contact after one week of rest, did not have any neck rehabilitation, and was never again seen by a physician despite having recurrent "neck sprains" during his remaining junior and senior years of competition. In light of the fact that initial neck injury increases the risk for subsequent neck injury (1), complete medical evaluation followed by intensive rehabilitation and follow-up physician clearance is a must, with very few exceptions, when dealing with these injuries.

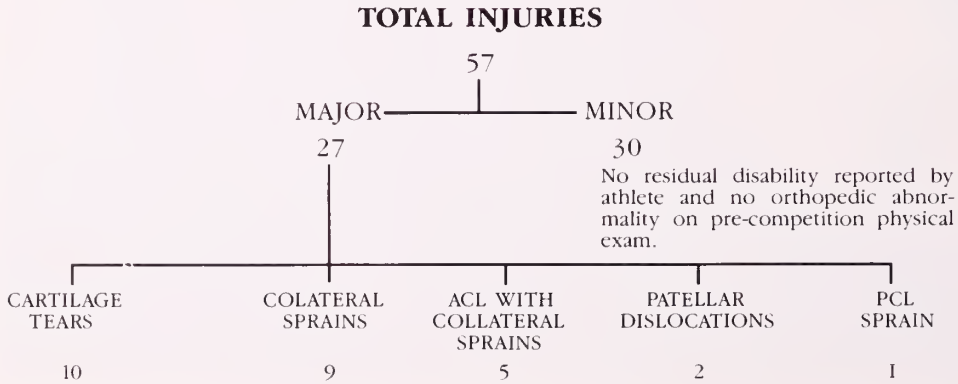

Figure 1. High school knee injurys between 1981 and 1985.

TABLE
Neck Injury Histories: 1981-1985

	Initially Seen by M.D.	*X-Ray*	*Rehab Program*	*Follow Up by M.D.*	*Repeat Injury*	*Time w/o Contact*
	YES	YES	YES	YES	YES	0
	YES	YES	YES	YES	YES	1 WEEK
	YES	YES	YES	YES	YES	1 WEEK
	YES	YES	YES	YES	YES	3 MONTHS
	YES	YES	YES	YES	YES	3 MONTHS
	YES	YES	NO	NO	YES	0
	YES	YES	NO	NO	YES	0
	YES	YES	NO	NO	YES	0
	YES	YES	NO	NO	YES	3 WEEKS
	YES	NO	NO	YES	NO	0
	YES	NO	NO	NO	NO	½ WEEK
	NO	YES	NO	YES	NO	2 WEEKS
	NO	YES	NO	NO	NO	3 DAYS
	NO	NO	YES	NO	NO	1 WEEK
	NO	NO	NO	NO	YES	0
Percent YES	73	73	40	47	67	

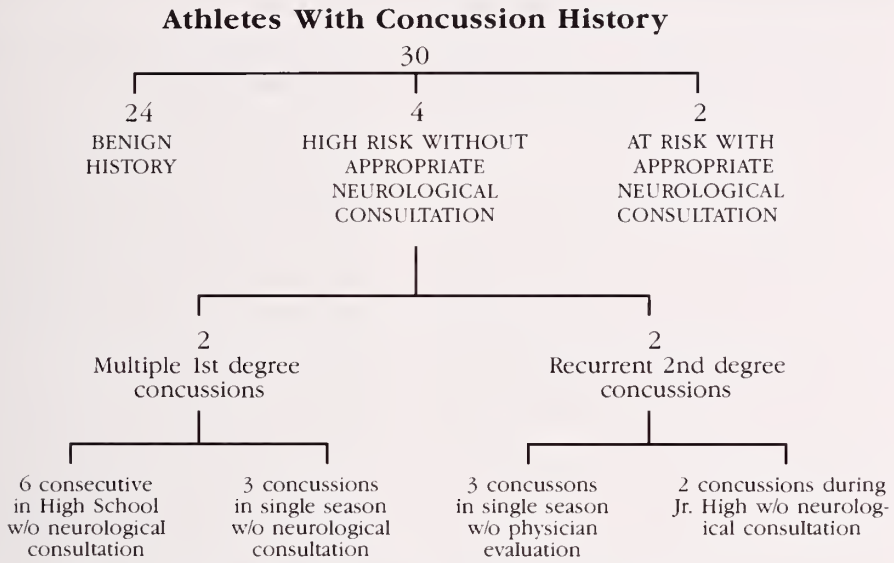

Figure 2. High school athletes with concussion history between 1981-1985.

Concussions

Thirty athletes in our group (14 per cent) suffered concussions during their pre-college football experience (Figure 2). Twenty-four of these were first-degree concussions characterized by no documented loss of consciousness and complete resolution of symptoms over a one-week period. Five athletes suffered second-degree concussions, and one incurred a third-degree concussion, characterized by loss of consciousness for longer than five minutes, wandering eye movements and lack of purposeful response (14). Multiple concussions occurred in five athletes, and the records of four of these suggest incomplete injury evaluations, putting these athletes in a "high-risk" classification.

One athlete reported six concussions during junior high and high school, and reportedly had an equivocal abnormal EEG, but was allowed to continue participation in collision sports. Two students had second-degree concussions during junior high or high school without neurological consultation. One of these students had multiple concussions during a single season and was never seen by a physician. An additional athlete also suffered multiple concussions during one season without neurological consultation. The fifth athlete with multiple concussions was seen in neurological consultation and had a normal EEG. His evaluation was felt to be adequate and demonstrated the proper approach in the management of a student athlete with a multiple-concussion history.

Geographical Case Rates

The above-described cases of deficient diagnosis or management of interscholastic football injuries encountered in our analysis were plotted on a regional map including West Virginia, Ohio, Pennsylvania, Maryland, and northern Virginia in an attempt to ascertain if any geographical tendencies existed. Twenty-five cases of possible incomplete diagnosis and/or improper rehabilitation occurred in West Virginia for a case rate of 20 per cent. The Akron, Ohio, area experienced a rate of 18 per cent while the southwestern Pennsylvania group demonstrated a 14 per cent rate. The occurrence of incomplete management in northern Virginia was the lowest at five per cent (one case in 20 athletes). The overall rate of suboptimal management of all injuries surveyed in the 221 athletes studied was 14 per cent (32 cases).

Although our study group of out-of-state athletes was small, it is interesting to note that the lowest rate occurred in northern Virginia where a refined program for health care, using faculty athletic trainers, has existed for several years. In Fairfax County, Virginia, for example, strict requirements are enforced in the employment and certification of high school athletic trainers, with emphasis on continuing education (15). Recently the West Virginia State Board of Education implemented a 1983 mandate that every high school which participates in interscholastic football must have a certified athletic trainer on staff and present for practices and games. The need is great for the establishment of programs of student athlete health care and safety. Team physicians should continue to be advocates of improved health care for their adolescent patients in support of this ideal.

Summary and Conclusion

Earlier investigators have identified deficiencies in injury management of high school athletes causing recovery rates to be lengthened by at least 30 days in 26 per cent of injured interscholastic football participants (16); an alarming estimate is that less than 10 per cent of the nation's 22,000 high schools currently provide adequate medical supervision for student athletes (17).

The five-year experience at Glenville State College revealed a disturbingly high incidence of improper rehabilitation of neck injuries, with 67 per cent of high school student athletes having less than optimal initial treatment and follow-up care. In addition, incomplete diagnosis and/or improper rehabilitation occurred in 37 per cent of those students experiencing major knee injuries. This was clearly demonstrated with documemtation from standard orthopedic screening tests for strength and stability at the time of pre-season examinations. Brain concussions were, for the most part, managed effectively with only 13 per cent of this group of 30 student athletes categorized as being at high risk for further participation in intercollegiate football.

These results point to a need for accurate diagnosis at the time of the injury, and for clear guidelines for returning the athlete to action post-injury based on sound rehabilitation principles. Team physicians must maintain a high index of suspicion when evaluating injuries of the high school student athlete in order to prevent the morbidity associated with long-term sequelae of incorrectly diagnosed or incompletely rehabilitated athletes with injuries to the neck and knee.

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Case Report, Review of Literature

Bilateral Synchronous Germ Cell Carcinomas

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A case of bilateral seminoma of the scrotal testes is presented. The incidence of bilateral germ cell carcinomas is quite low. On review of the world literature only 63 bilateral testis tumors have been reported.

Bilateral germ cell carcinomas are rare. Sixty-three bilateral testis tumors have been reported in the world literature (1-24). Separating the primary germ cell carcinomas in this group from lymphoma, sarcoma, and metastatic disease is difficult. Much of the problem arises from the evolution of our knowledge about this disease as reflected in advances in classification and treatment. We present a case of bilateral seminoma and then review the literature on bilateral germ cell carcinoma.

Case Report

A 27-year old white male presented to West Virginia University Emergency Room with a complaint of bilateral testis enlargement. Pertinent physical findings include no palpable cervical, supraclavicular, axillary or inguinal adenopathy. There were no palpable abdominal masses. Both testes were obviously enlarged. The right testis was 12 cm x 30 cm in size and hard with a smooth texture. The left testis was 4 cm x 7 cm and was hard and irregular to palpation. Nothing in the patient's history suggested cryptorchidism.

Pertinent laboratory studies revealed a lactic dehydrogenase of 1395IU/L (normal 100 to 225IU/L), beta-subunit human chorionic gonadotropin level of 18mIU/ml (normal < 5mIU/ml), and serum alphafetoprotein level of 5ng/ml (normal < 15ng/ml).

Preoperative chest x-ray showed no pulmonary or mediastinal disease. The following day the patient underwent bilateral radical orchiectomies. The pathology report was bilateral seminomas of the testes. Immunoperoxidase staining for HCG and AFP was unsuccessful for technical reasons. Postoperative radiologic assessment included an intravenous pyelogram, computerized tomography of the abdomen and pelvis, and a bipedal lymphangiogram. These showed a question of metastatic tumor in the para-aortic nodes at the level of the left renal

hilum. One week postoperative all tumor markers had returned to normal values.

Follow-up treatment consisted of radiation therapy with 3100 rads to the para-aortic area and pelvis, and 3,000 rads to the mediastinum and left supraclavicular area. One year after presentation the patient has no evidence of disease by chest x-ray, tumor markers or physical examination.

Most investigators credit Bidard with the first report of a bilateral testis tumor in 1853. According to Hotchkiss and Laury, this was an "encephaloid cancer" in a 27-year-old patient (8). It is unclear as to what the exact pathology of this tumor was, though a seminoma is a possibility. Livingston had an earlier report in 1805 of a bilateral testis cancer but Dunlap and Ochsner felt this case "resembled an infectious process rather than a malignant one" (21). Until 1942 the literature consisted of scattered case reports. Hamilton and Gilbert collected a series of consecutive testis tumor patients from different hospitals totaling 1,466 cases. Ten of these cases were bilateral tumors. It is not known how many of these tumors were synchronous. The cell types in this impressive collection of cases were recorded as unicellular or teratoma only (22).

For discussion of cell types in bilateral primary germ cell carcinoma, we have chosen only cases published since 1950, and only from those reports using some form of the Dixon-Moore classification. This was done to reduce the confusion arising from the use of various systems of nomenclature. As shown in Table 1, two thirds of these cases were bilateral seminoma. These cases represent a higher percentage of seminoma than one would expect. Due to the small size of the series, it is difficult to draw conclusions.

It is possible that the pathology of these 17 cases might be revised if reviewed with the modern immunoperoxidase stains available today. Javadpour reports that many tumors which would have been classified as germ cell tumors in the past can now be clearly identified as lymphoma, with the use of immunoperoxidase staining for various markers (10).

TABLE 1

Bilateral Synchronous Germ Cell Carcinoma

Cell Type	*Age*
Bilateral Spermatocytic Seminoma - 1	73
Seminoma and Embryonal Cell - 1	22
Bilateral Embryonal Cell - 2	18,29
Carcinoma-in-situ - 1	30
Bilateral Seminoma - 12	Mean age 32.1 (range 24 - 46)

*Dates compiled from references listed in bibliography

TABLE 2

Incidence of Bilateral Synchronous Germ Cell Carcinoma

	Bil. Sync.	*Total Cases*	*Incidences*
Thachery	2	400	.5%
Sokal	2	760	.26%
Hoekstra	1	385	.26%
Patton	0	570	0%
Mackay	5	731	.68%
TOTAL	10	2,846	.35%

Obviously, bilateral synchronous germ cell carcinoma is an unusual manifestation of a rare disease. In five large series of testis cancer published since 1960 there was a combined incidence of bilateral synchronous germ cell carcinoma of 0.35 per cent of all patients (Table 2) (7, 9, 18, 19, 23). Using the incidence of testis cancer of 2.1 per 100,000 males (24), the chance occurrence of two independent testis cancers in one year is 4.4×10^{-5} per 100,000 males. Using the rough estimate of 0.35 per cent of testis cancer patients having bilateral primary synchronous germ cell carcinomas, the actual incidence is 7.35×10^{-3} per 100,000 males. This is approximately 1,700 times the occurrence of bilateral synchronous tumors.

Bilateral synchronous germ cell carcinoma clearly occurs more commonly than one would expect by chance. The cause of this is not clear. Many investigators have noted this finding in both synchronous and metachronous germ cell carcinoma. Recent observations of decreased fertility and poor semen quality have led some to postulate that dysgenesis may predispose some males to both germ cell carcinoma and infertility.

A matter of importance for the clinician treating a patient with bilateral germ cell carcinoma is determination of the prognosis. Unfortunately, it is particularly difficult to draw conclusions from the small amount of available data. Because of the infrequent bilateral occurrence of this tumor, it would take many years to collect a series large enough to allow adequate analysis. For example, MacKay's series of five bilateral synchronous germ cell tumors covers 23 years (9). Considering the tremendous advances that have been made in the treatment of this disease, the difficulty of establishing a prognosis for these patients is apparent. Nevertheless, most investigators believe the prognosis for patients with bilateral synchronous germ cell carcinoma does not differ significantly from that of patients having unilateral tumors.

In conclusion, bilateral synchronous germ cell carcinomas are an unusual manifestation of this disease. The incidence of bilateral tumor appears to be greater than would be expected by chance. This suggests the presence of some factor or factors predisposing to bilateral disease. Identification of these factors awaits further investigation.

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Case Report

Neuroleptic Malignant Syndrome And Hyperosmolar Coma

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A patient with underlying history of manic depressive disorder, diabetes mellitus, and carcinoma of sigmoid colon with liver metastases, had been treated with lithium, haloperidol, insulin, and amantadine for muscle rigidity. He developed hyperthermia (107.2°F), irregular respiration, unresponsiveness, mutism, increasingly severe muscle rigidity, hyperglycemia and azotemia. His clinical symptoms and signs were consistent with neuroleptic malignant syndrome (NMS) hyperosomolar coma. He responded to withdrawal of lithium and haloperidol, resumption of amantadine, and treatment with bromocriptine.

The neuroleptic malignant syndrome is a serious idiosyncratic reaction resulting from either neuroleptic agents or from discontinuation of antiparkinsonian medications or a combination of these. NMS is an uncommon disorder, occurring in about 0.5 per cent to 2.4 per cent (1, 2) of all patients taking neuroleptics, and causes more than 4,000 deaths per year in the United States (3).

The diagnosis of NMS is sometimes not immediately considered or recognized (4). Medications most frequently causative of NMS are haloperidol, chlorpromazine, fluphenazine, trifluoperazine, and thioridazine (5), but any neuroleptic drug can cause it. NMS has also occurred following discontinuation of antiparkinsonian therapy such as amantadine (Symmetrel) and levodopa (Dopar, Larodopa) or carbidopa-levodopa (Sinemet) (6, 7).

It presents with explosive onset of high fever, mental status changes, muscle rigidity, autonomic dysfunction, respiratory distress and, if not promptly corrected, rhabdomyolysis causing development of acute renal failure. NMS may cause leukocytosis, elevation of hepatic enzymes and serum CPK, and/or myoglobinuria (1).

Early recognition and therapy may decrease morbidity and mortality (5). The principles of treatment consist of supportive care, discontinuation of all neuroleptics, and administration of bromocriptine or dantrolene. Bromocriptine is given starting with five mg. three times a day, then increasing by five mg. tid increments daily to a maximum dosage of 20 mg. four times a day (8). In addition, Dantrolene Sodium may be used as adjunct therapy in the management of severe muscle rigidity (9). It produces muscle relaxation, but does not affect the CNS directly. Initially, it should be given intravenously 0.25 mg/kg four times a day, gradually increasing to a maximum dosage of three mg/kg four times a day.

Case Report

Mr. C., a 63-year-old white male with many years' history of manic-depressive disorder, diabetes mellitus, chronic obstructive pulmonary disease, and atherosclerotic heart disease, had been admitted to the medical service seven months earlier because of carcinoma of the sigmoid colon. He was found to be inoperable because of liver metastases and accordingly was transferred to the long-term care service where he received lithium carbonate 300 mg. bid, haloperidol two mg. qAM and five mg. qHS, amantadine 100 mg. tid, along with other medications including furosemide, nitroglycerine, aminophylline, terbutaline, insulin, potassium, prednisone, and allopurinol.

"Physicians who prescribe neuroleptics, dopamine antagonists or antiparkinsonian agents should familiarize themselves with this syndrome."

Although he had no definite diagnosis of Parkinson's disease, amantadine had been prescribed several months previously because of muscle rigidity. Five days prior to being transferred to the medical intensive care unit, he complained of weakness, developed fever

(102.2°F rectally), and hyperglycemia (blood sugar greater than 400 mg. per cent). One day prior to MICU transfer, he was noted to be lethargic, and on the day of his transfer to MICU he had irregular respiration with periods of apnea.

His overall respiratory rate was 18 per minute, body temperature 107.2°F, pulse rate 122 per minute, and blood pressure 120/70 mmHg. He was unresponsive, deeply comatose and severely dehydrated. There was no diaphoresis. His breath sounds were mostly clear with occasional rhonchi. His heart sounds were regular without arrhythmia.

Abdominal examination disclosed no distention, but hepatomegaly two fingerbreadths below the right costal margin, and a palpable left lower quadrant mass (approximately four cms. in diameter).

His blood sugar was 622 mg. per cent, BUN 72 mg. per cent, creatinine 3.7 mg. per cent (10 days previously, his BUN and creatinine were normal); serum sodium 147 mEq/L, potassium 4.6 mEq/L, protein 6.9 gm per cent with albumin 3.6 gm per cent, calcium 10.7 mg per cent, phosphorus 2.9 mg per cent, uric acid 14.2 mg. per cent, total bilirubin 0.6 mg per cent, SGOT 59 IU/L (normal 5-40), LDH 550 IU/L (normal 91-180), alkaline phosphatase 492 IU/L (normal 30-115), CPK 260 IU/L (normal 35-232), white blood count 19,700 cells/cumm (predominantly neutrophils and bands), hemoglobin 14.3 gm per cent, hematocrit 49.5 per cent (10 days previously, hematocrit was 34.8 per cent).

He was considered as having hyperosmolar coma and sepsis and treated with a cooling blanket, intravenous fluids, regular insulin, and intravenous ceftazidime. Blood cultures were reported negative. Urine culture grew Streptococcus Fecalis. Chest x-rays were negative. Electrocardiogram showed diffuse myocardial ischemia.

Treatment

A nasogastric tube was inserted and drained "coffee ground" material, and he accordingly was placed on intermittent nasogastric suction, NPO, and given ranitidine intravenously. His dehydration and diabetes mellitius improved but he remained comatose. The next day, it was noted that he had severe "lead pipe" and "cog wheel" muscle rigidity, and universally diminished deep tendon reflexes. Babinski sign was not present. The diagnosis of neuroleptic malignant syndrome (NMS) was made.

He was restarted on amantadine 100 mg. three times a day, and bromocriptine five mg. three times a day was started and gradually increased to 15 mg. three times a day. His serum lithium level at this time was 0.55 mEq/L (therapeutic levels 0.8 to 1.2 mEq/L), urinary sodium was 10 mEq/L, urinary potassium was 43 mEq/L, and urine examination for myoglobin was negative. During these first few days in the MICU, he had hypernatremia and hypercholoremia (sodium was as high as 165 mEq/L and chloride as high as 118 mEq/L, BUN and creatinine were monitored daily and were returning toward normal. His antibiotic was changed to mezlocillin in accordance with his urine culture and sensitivity test findings.

"NMS typically has onset following an episode of exhaustion or dehydration."

Results

He became afebrile 48 hours following admission to the MICU, and was somewhat more responsive but still nonverbal. His verbal response returned on the fourth day in the unit, and his muscle rigidity improved gradually to the point that he could feed himself on the seventh day of his MICU sojourn, at which time he was transferred out of the unit and returned to the long-term care service.

Discussion

NMS typically has onset following an episode of exhaustion or dehydration (1). It is likely that the syndrome developed on the day of his MICU transfer in response to a urinary tract infection in this debilitated patient. The diagnosis was made when neuromuscular signs were superimposed on his high fever, dehydration, irregular respiration, coma, and leukocytosis. Admission to MICU was essential in this severely ill patient. Initially he was diagnosed as having hyperosmolar coma. Amantadine was discontinued for 24 hours due to mild upper gastrointestinal bleeding and gastric retention. This patient had hypernatremia with severe dehydration. This is in contrast to a previously reported case with hyponatremia and recurrent neuroleptic malignant syndrome (10). He recovered on supportive care and responded dramatically to bromocriptine and amantadine.

The NMS symptom complex results from the central dopamine blockade of basal ganglia and hypothalamus (11), and altering of thermoregulation. The NMS is a potentially fatal disease and is probably underdiagnosed. Physicians who prescribe neuroleptics, dopamine antagonists or antiparkinsonian agents should familiarize themselves with this syndrome.

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President's Page

"It is almost certain that there will be a diversity of opinions and recommendations regarding RB-RVS and, particularly, the dollar conversion factors, that could be extremely divisive to Organized Medicine."

RB-RVS: Another Occasion for Unity

Twice during the last year or so, The President's Page stressed unity and solidarity to the membership. These are again qualities Organized Medicine will desperately need in the months ahead, because knocking on the doors of our House of Medicine is a controversial issue, the Resource-Based Relative Value Scales (RB-RVS), which we are certain will revolutionize the physician payment system in Medicine. This Harvard study will be concluded in a few weeks. As we understand it, the study will be submitted to HCFA (Health Care Financing Administration), after which the Secretary of HHS (Health and Human Services) will have the responsibility of releasing the report and supporting data to the Physician Payment Review Commission to develop the so-called dollar conversion factors. There will be considerable debate over what allocation of the dollars will be for the many different processes physicians are involved in when dealing with their patients. The information we have is that there will be great emphasis placed on cognitive skills, years of training and practice overhead, to name a few.

One thing of which we are certain is that reimbursements will not get any larger; instead, we expect to see them get smaller. The reimbursement pie is frozen.

Although the American Medical Association has been a subcontractor to the Harvard study, the AMA is in no way obligated to accept or recommend the study. The AMA is preparing to conduct a thorough and extensive evaluation of this study. Other physician groups have already undertaken independent studies of their own. It is almost certain that there will be a diversity of opinions and recommendations regarding RB-RVS and, particularly, the dollar conversion factors, that could be extremely divisive to Organized Medicine. All of Organized Medicine must be united to deal with this new challenge. We must speak in one voice to the government.

Organized Medicine must not allow itself to be piece-mealed and be a victim of the divide-and-conquer tactic. There should be no splinter groups trying to make their own deal. All of our resources should be combined into one lean, mean, fighting machine.

—Cordell A. De La Pena, M.D.

Personal Remembrances of L. Walter Fix

Walter Fix was a passionate man. He could angrily challenge the unethical behavior of a fellow physician that the rest of us were willing to overlook, or stand at a meeting with tears flowing during the playing of the national anthem. He felt strongly about ideals and principles and made no apologies for his stand.

He gave his all to the West Virginia State Medical Association activities. He appeared on time for every meeting despite the long drive to Charleston and back home from the eastern panhandle.

Walter was well-known to many in the American Medical Association hierarchy. He stimulated the founding of OSMAP, the national organization of current and former state association presidents, and served as its first President.

He was the fiscal conscience of the State Association. Most of us have been rebuked by him for our profligacy. On one memorable occasion following the completion of the Association's building, Walter was irked by a local firm's bid of several hundred dollars to landscape the building. He bought a shovel at a local department store and completed the planting himself at small cost.

Walter was very proud of the things he had a hand in building, whether it was the Association building or an extension to the sewage system in his beloved Martinsburg.

And who can ever forget a visit to the lovely Fix home in Maple Manor, built mostly by their own hands.

Walter and Kay treated royally the Association presidents who stayed in their home. During my stay, I had commented on the flavorful asparagus grown in the Fix garden. Walter insisted on digging up some plants for me to take home.

He liked to travel with his family, and even though retired from active practice, his plans for the future reflected his enormous energy.

Walter Fix was a man for all seasons, a leader, a builder, a businessman, a physician. Above all, however, he was a good friend with a fervent love of people. More than grieve his death, we celebrate his life.—DZM

Poll Reflects Public View

A recent question asked by the WVSMA's public relations counsel, Willard & Arnold, in a W&A Statewide Poll gives physicians some degree of comfort while serving at the same time to suggest the need to "stay on their toes."

In response to the question "How would you rate the overall performance of doctors in West Virginia?," 9.7 per cent of the 415 persons surveyed rated the performance as "excellent" and another 50.8 per cent as "good." Thus, just over 60 per cent of West Virginians give high marks to physician performance. Some 25.5 per cent offered "fair" as their evaluation.

Giving pause for thought, however, is the fact that 11 per cent rated the performance as "poor," and another 2.9 per cent had "no opinion."

We obviously know little or nothing about the individuals responding, but the demographics of those surveyed offer some insights. Among male respondents an equal 11.34 per cent rated the performance as excellent and as poor. Only 8.64 per cent of the females rated physician performance as "excellent" while 51.23 per cent rated it as "good."

As might be expected, the "over 60" age bracket contained the highest percentage of respondees (12.31 per cent) who rated physician performance as "excellent," followed by the 26- to 35-year-olds, with 11.22 per cent giving the same rating. The 18- to 25-year-old crowd displayed the greatest displeasure with physician performance, with 14.29 per cent indicating a "poor" rating.

In the financial demographic, those with incomes under $10,000 presented both the best and the worst, with 11.84 per cent rating the performance of physicians as "excellent" while a slightly higher 13.16 per cent gave them a "poor" rating. Those with incomes over $40,000 tended to group most in the middle, with fully 81 per cent saying the performance was either good or fair.

While the survey perhaps proves very little other than the fact that more people than not still approve of the medical profession's performance, the number of those increasingly critical of the profession continues to grow.

"Doctor bashing" continues to be a popular sport despite the high number of people who claim that their doctor is the greatest practi-

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tioner in the business while harboring suspicions of the profession as a whole. More importantly, the survey serves to point to the fact that as discontent grows the potential for ever greater numbers of professional liability suits will continue to grow as well unless something drastic takes place to change the public attitude.

Meanwhile, it seems the best thing the average physician can do is to practice high-quality (high-tech?) medicine with plenty of "high-touch" caring designed to enhance the patient relationships which can largely prevent suits from being brought. Or in marketing jargon, "give the customer (patient) what he wants (quality medical care) at a price he can afford in a convenient setting delivered by an affable practitioner," and customer satisfaction will largely assure the rest.

Platitudes? Sage advice? Try it and judge for yourself, and then let your colleagues know of your successes or failures.—MGS.

Our Readers Speak

Nurses Oppose Amendment

The Respiratory Care Practitioners' proposed amendment to the West Virginia Regulations & Law for Licensing Hospitals has been an item of intense discussion among nurses.

At our recent West Virginia League for Nursing, (WVLN) Board of Directors meeting, the enclosed Statement and Response was written and approved. It was then shared with the general membership at our annual meeting and was again approved.

We wanted the share our Statement and Response with you due to its great importance.

Please feel free to contact me if you have any questions at 748-5142.

Statement and Response
to the
Proposed Amendment to the West Virginia Regulations and Law for Licensing Hospitals

The West Virginia League for Nursing opposes the amendment to the West Virginia Regulations and Law for Licensing Hospitals that would permit Respiratory Care Practitioners to accept verbal and telephone orders from licensed physicians.

The practice of "registered professional nursing" (is) based on knowledge and application of principles of nursing, . . . responsible supervision of a patient, . . . accurate recording of the facts, . . . the supervision and teaching of other persons, . . . administraton of medications and treatments as prescribed by a licensed physician or a licensed dentist . . ."(1). This act allows the nurse practicing in West Virginia to ultimately coordinate total patient care.

We believe the proposed amendment would fragment patient care, jeopardize human safety, and further complicate communications to the detriment of the patient.

1. West Virginia Code. Registered Professional Nurses, 1975, Sec. 30-7-1b.

Lisa E. Conti, B.S.N.
President
West Virginia League for Nursing

Name Withdrawn

(Note: Addressed to WVSMA Executive Director Meruyn G. Scholten)

I am very grateful to the Council for its resolution in support of my nomination for the Deanship at the West Virginia University School of Medicine.

I thank you for the time and effort on my behalf. However, I have decided to withdraw my name from nomination and to devote my energies to the establishment of a Geriatric program at the Health Sciences Center.

Please extend my sincere thanks to all who supported my consideration.

David Z. Morgan, M.D.
Professor of Medicine
WVU School of Medicine

Liability Insurance, Endoscopic Therapy on Conference Program

A Wheeling plastic surgeon and a Racine, Wisconsin, gastroenterologist will be speakers at general sessions of the WVSMA Annual Meeting August 16-21 in White Sulphur Springs at the Greenbrier.

D. Verne McConnell, M.D., Wheeling, will talk on "Professional Liability Insurance in West Virginia: Controversial Surgical Procedures" during the Friday morning, August 19, general session.

"Endoscopic Therapy of Biliary and Pancreatic Disease" will be the title of the paper to be presented by Joseph E. Geenen, M.D., during the Saturday morning, August 20, session.

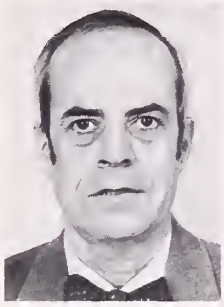
Doctor Geenen is Clinical Professor of Medicine, Division of Gastroenterology, Medical College of Wisconsin, Milwaukee, and Director, Digestive Disease Center, St. Luke's Hospital in Racine.

He also will speak on "Endoscopic Therapy of Pancreatic Disease" at the Friday, August 19, luncheon meeting of the West Virginia Gastrointestinal Society.

Princeton, Columbia Graduate

Doctor McConnell is in the full-time practice of plastic and reconstructive surgery as a member of a five-physician group with offices in Wheeling and Steubenville, Ohio. The group is involved in the teaching service at West Virginia University, and Doctor McConnell is Clinical Professor of Surgery at WVU.

Born in Knoxville, Ohio, Doctor McConnell was graduated from Princeton University, and received his M.D. degree from Columbia University. He served a surgical internship at Johns Hopkins, a general surgery residency at Vanderbilt, and completed his training with a plastic surgery residency at UCLA in Los Angeles.



McConnell

Geenen

Upon completing residency training in 1966, Doctor McConnell was in solo practice in plastic surgery in Los Angeles until 1973 when he came to West Virginia.

Editorial Board Chairman

Doctor Geenen, a member of Alpha Omega Alpha medical honor society, is a past President of the American Society for Gastrointestinal Endoscopy. At the present time, he is Chairman of the Editorial Board of *Gastrointestinal Endoscopy.*

Doctor Geenen also is Director of the Trinity Memorial Hospital Gastrointestinal Laboratory in Cudahy, Wisconsin.

He is the Editor of five books, and the author or co-author of a number of book chapters and more than 50 articles. He recently edited the book, *Techniques of Therapeutic Endoscopy.*

Doctor Geenen has presented papers in the United States and a number of foreign countries at international meetings. His expertise is in ERCP and therapeutic procedures involving the pancreas and biliary tree.

He received both his undergraduate and M.D. (1960) degrees from Marquette University in Milwaukee, interned at the University of Minnesota Hospitals, and completed residencies in internal medicine at Milwaukee County General Hospital and in gastroenterology at Marquette.

He is a Fellow of the American College of Physicians and the American College of Gastroenterology.

Convention Schedule

Convention activities will begin with a meeting of the Executive Committee at 6 P.M. on Tuesday, August 16. Council will meet Wednesday morning, and the first session of the House of Delegates will be held that afternoon. Thursday afternoon will be set aside for recreation including golf, tennis and volleyball tournaments. Meetings of WVSMA sections and specialty societies will be held Friday afternoon.

A luncheon is scheduled Saturday for past presidents of WVSMA, visiting neighboring state presidents and West Virginia 50-year graduate physicians.

The second and final house session will be held Saturday afternoon. As announced earlier, the delegates will be addressed by Dr. James E. Davis of Durham, North Carolina, who was installed as AMA President in June.

A Presidential reception, hosted by Parker/Hunter Incorporated of Clarksburg, will be held on Wednesday evening, and there will be a reception honoring exhibitors on Thursday evening. On Friday evening, cocktail parties for WVU, Medical College of Virginia and the University of Virginia Alumni will be held from 6:30 to 7:30; however, no specific Association-sponsored entertainment event has been planned for Friday evening.

The 121st convention will end on Saturday evening with McDonough Caperton Insurance Group sponsor-

ing a reception for outgoing and incoming Association and Auxiliary officers.

Resolutions Deadline

All resolutions prepared for presentation in the WVSMA House of Delegates must be sent to Executive Director Merwyn G. Scholten at least two weeks before the opening of the Annual Meeting. The deadline for submitting resolutions is August 2.

If submitted later, unanimous consent of the House is required for presentation.

Announced Previously

Speakers and topics announced previously are:

Thursday Morning, August 18—"The Psychosocial Management of the AIDS Patient and Family," Jeffery C. Hutzler, M.D., Program Director of the Outpatient Clinic at the Cleveland Clinic Foundation; and "Mandatory Assignment and Rising Health Care Costs: A Response to Critics," Timothy B. Norbeck, Executive Director, Connecticut State Medical Society.

Friday Morning, August 19—"A Defense Attorney's Perspective on Medical Liability," James L. Griffith, J.D., Griffith & Burr, P.C., Philadelphia; and "Sensible Practice of Medicine in a Technologically Oriented Society—Some Call This Ethics," Eugene A. Stead, Jr., M.D., Florence McAlister Professor (Emeritus) of Medicine and Chairman, Department of Medicine, Duke University.

Saturday Morning, August 20—"Cardiovascular Surgery at West Virginia University in 1988," Gordon F. Murray, M.D., Professor and Chairman, WVU Department of Surgery, Morgantown; and "Heart Disease in West Virginia: A Plan for Prevention and Rehabilitation," Robert C. Touchon, M.D., Professor of Medicine and Section Chief of Cardiovascular Medicine, Marshall University School of Medicine, Huntington.

Program Committee

Members of the Program Committee are Drs. Robert D. Hess, Clarksburg, Chairman; Bill M. Atkinson, Parkersburg; Michael J. Lewis, Morgantown; Catalino B. Mendoza, Jr., Clarksburg, and Maurice A. Mufson, Huntington.

National President Speaks

MU Launches AOA Chapter

The new Beta of West Virginia Chapter of Alpha Omega Alpha, medical honorary society, was inaugurated at Marshall University School of Medicine in an installation ceremony this spring.

Thirty-two students, alumni, and faculty were inducted into the new chapter.

Dr. Jeremiah Barondess from Cornell University Medical College in New York City, national AOA President, was the evening's speaker.

"I bring you congratulations and a warm welcome from the Board of Directors of Alpha Omega Alpha, and, through them, from the entire membership," Doctor Barondess said. "We are delighted to have you involved. Beta of West Virginia joins more than 120 active chapters of a strong organization with an expanding array of activities and a powerful presence, a force for good in American medical education."

Charles E. Turner, M.D., of Huntington, 1986-87 WVSMA President, is Councillor for the Marshall Chapter.

Alumni Included

AOA permits its chapters to induct up to one sixth of each class, providing that each person is in the top 25 per cent of his or her class. In addition, the School was permitted in this first installation to induct qualified alumni from the last five graduating classes.

Inducted into the society were:

Faculty—Doctor Gretchen E. Oley, Department of Medicine (also a 1982 graduate of the School of Medicine).

Alumni—Drs. David R. Ayers, H. Edward Ayers, Jr., Timothy D. Canterbury, Kevin M. Clarke, Mark E. Coggins, Joedy L. Daristotle, Ronald DeAndrade, Jr., Elaine L. Flanders, Robert T. Gallaher, R. Mark Hatfield, Scott L. Henson, Robert E. Mehl Jr., Stevan J. Milhoan, Kathleen M. O'Hanlon, C. Douglas Phillips, Mark F. Sheridan, Elizabeth L. Spangler, Sandra L. Tabor, Susan A. Terry, Donald H. Trainor, Jr., Sue E. Wegmann-Hanks, and Kevin W. Yingling.

Students—Clark D. Adkins, David F. Hubbard, Michael K. Hurst, D.D.S., J. Douglas Kirk II, Joan A. Lynch, Jeffrey D. Maynard, James M. Mears, Cheryl Bocook Pippin, and M. Catherine Slusher-Clements.

Perpetuation of Excellence

"When AOA was formed [1902], its purpose was in part to recognize excellence, but far more importantly, to perpetuate it," Doctor Barondess said. "Of about 25,000 medical students in this country at the turn of the century, no more than 15 per cent were college graduates, and most had only a high school dipolma or its equivalent," he noted.

"Let me express . . . the hope that this Chapter will play a meaningful part in the life of the School by contributing to its intellectual ambience and by helping to reinforce the idea that the pursuit of excellence is worthwhile, not alone on a individual basis, but as an institutional goal as well."

Annual Meeting Registration

Registration fee for members of the WVSMA for the 1988 Annual Meeting at The Greenbrier August 16-21 is $25 and for nonmembers/out-of-state physicians, $100. Please make check payable to WVSMA and mail to PO Box 4106, Charleston, WV 25364.

"That doesn't really sound like a 'miracle cure' for my financial aliments."

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

CAMC/West Virginia University, Charleston Division

Aug. 5, Ultrafast CT Scanning

Aug. 6-7, Advanced Trauma Life Support

Sept. 14, Hypertension: Protecting the Patient

Sept. 17, Swallowing Disorders

Sept. 20, Advanced Medline

Oct. 1, Transplant Seminar

Oct. 15, Trauma Seminar

Oct. 19, Faculty Research Day

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—July (vacation)

Brownsville, PA, ★ General Hospital, 11 A.M.—July (vacation)

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—July 14, Lipid Lowering Agents, William Carter, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—July 20, Thyroid Disease Update—Workup of a Goiter, When to get a Scan, When You Need an Uptake, Elliott Chideckel, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—July 5, Peripheral Vascular Disease, Donald E. McDowell, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—July 6, Pediatric Emergency, Carl Holland, M.D., & John Walker, R.N.

Hurricane, • Putnam General Hospital, 9:15 A.M.—July (no program)

Logan, • General Hospital, 11:30 A.M.—July (no program)
Aug. 19, Hodgkin's Disease, Steven Jubelirer, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—July 12 (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—July 19, Substance Abuse: Update on Drug & Alcohol Abuse, Patricia Treharne, M.D.
Aug. 16, Breast Cancer, Steven Jubelirer, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—July (vacation)

Montgomery, • General Hospital, 12 P.M.—July 6, Current Advances in the Treatment & Management of the MI, Harold Selinger, M.D.

New Martinsville ★ Wetzel County Hospital, 12 P.M.—July (vacation)

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—July 26 (vacation)

Ripley, • Jackson General Hospital, 12:30 P.M.—July 8, Dermatology Update, Kim Skaff, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—July (no program)

Spencer, • Roane General Hospital, 12:30 P.M.—July 19, Aeromedical Services—Transport Update (speaker tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—July 26, W. Va. Sinuses, Blair Thrush, M.D. (Special dinner meeting at Crossroads Inn. For reservation, call Dr. Dave Smith at 846-2522)

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—July (vacation)

Welch, ☐ Welch Public Library, 12 P.M.—July 20 (vacation)

Weston, ★ Stonewall Jackson Hospital, 6 P.M.—July (vacation)

Wheeling, ★ Ohio Valley Medical Center 8 P.M.—July (vacation)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—July 27 (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library 4 P.M.—July (vacation)

Williamson, ☐Memorial Hospital Cafeteria, 6:30 P.M.—July 7 (vacation)

Past President Fix Dies

L. Walter Fix, M.D.

Note: See also Editorial on Page 291.

L. Walter Fix, M.D., of Martinsburg, WVSMA President in 1980-81, died June 3 in a hospital there following a heart attack at his home. He was 70.

Doctor Fix, a pathologist and dermatologist, was a member of the West Virginia Board of Medicine.

He served as Chairman of the WVSMA Council two times. WVSMA presidents become Chairman of the Council following their presidency but Doctor Fix also was appointed Chairman in 1984-85 after the 1983-84 President, Carl R. Adkins, M.D., left the state.

Doctor Fix was Treasurer and former Chairman of the West Virginia Medical Properties, Inc., which was established to handle financing of the construction and maintenance of the WVSMA headquarters building. As WVSMA President Elect and Chairman of the Ad Hoc Building Committee in January, 1980, he was instrumental in the purchase of the property for the new headquarters and in initiating contacts with building contractors to carry out the construction.

He was appointed to the State Board of Medicine by Governor Moore for a term from September 1, 1987, to September 1, 1991.

Doctor Fix, a member of the Publication Committee for the *Journal,* was a former Berkeley County Coroner and Medical Examiner for the eight panhandle counties from 1975 to 1981.

A native of Buffalo, New York, he received his M.D. degree in 1943 from the University of Buffalo where he previously completed undergraduate work. In 1943-54, he was on duty as a commissioned officer in the U. S. Navy, with assignments in deep sea diving and submarine medicine along with residency training that brought certification in both clinical and anatomic pathology.

Doctor Fix held a number of teaching positions from 1948 until 1974, including those at the University of Illinois, George Washington University in Washington, D.C., and Penn State University at Hershey.

He served on the staff of the Veterans Administration Medical Center in Martinsburg from 1954 until 1969, and was on the staff of the VA Medical Center in Lebanon, Pennsylvania, from 1969 until 1973. He also was a teacher and on the staff of the University of Maryland School of Medicine.

Doctor Fix was a member of WVSMA's Council from 1972 until 1978, when he was elected as the Association's Vice President.

Fellow Emeritus

He was a Fellow Emeritus of the College of American Pathologists and the American Society of Clinical Pathologists, past President of the Organization of State Medical Association Presidents, and a member of the Eastern Panhandle Medical Society, West Virginia State Medical Association and American Medical Asssociation.

Surviving are the wife, Mrs. Catherine E. (Kay) Caryl Fix; five daughters, Mrs. Marilyn Nelson, Fremont, California; Mrs. Linda Irving, Richmond, Virginia; Pamela Sites, Fallston, Maryland; Anne C. Fix, Sykesville, Maryland, and Mrs. Elaine C. Merceruio, Martinsburg; a sister, Mrs. Carolyn Martin, Lorain, Ohio, and seven grandchildren.

Doctor Fix was a member of St. John's Lutheran Church where funeral services were held June 6.

Pallbearers were Drs. Carl J. Roncaglione, Charleston; Stephen D. Ward, Wheeling; Cordell A. De La Pena, Clarksburg; Bill M. Atkinson, Parkersburg; James D. Helsley, Berkeley Springs, and Harvey D. Reisenweber, Orlando I. Agnir and Vigilio M. Tan, all of Martinsburg.

Memorial contributions may be made to Project STEP of Kings Daughters Court, 116 East King Street, Martinsburg 25401 or to a charity of one's choice.

AMA Car Rental, Mortgage Benefits

The AMA has announced two new benefits for members: (1) a mortgage financing program to buy or refinance a home, and (2) addition of National Car Rental to the AMA Members-Only Car Rental Discount Program.

The mortgage financing program can be handled entirely via a toll-free number, 1-800-AMA-4PRU (1-800-262-4778) from obtaining a pre-qualification estimate to checking on the status of an application already taken.

As an exclusive feature of this program, the origination fee will be reduced one fourth of one per cent to 1.¾ per cent (subject to change without notice). Additionally, with down payments of 20 per cent or more, relaxed underwriting guidelines are used. This can result in up to a 20-per cent increase in buying power.

All AMA members recently received a package that reviews the program in detail.

The National Car Rental program is in addition to the AMA's Member-Only Hertz Rental Car Discount Program.

Advantages include: special daily rates; 10-per cent discount on weekend/weekly/monthly rates; Emerald Club frequent renters program; guaranteed reservation if you call 24 hours in advance, and free GTE Mobilnet Telephones in many cars.

For more information about the car rental discount program contact Cheryl Herman at (312) 645-4587.

Board Restrictions On Amphetamines

Editor's Note: The *Journal* publishes periodically news, rules, and/or interpretations thereof, from the West Virginia Board of Medicine which are believed to be of value to state physicians. Below, the Board discusses restrictions on prescribing amphetamines.

West Virginia Board of Medicine Legislative Rules, Section 19, Causes For Denial, Probation, Suspension Or Revocaton Of Licenses And Permits, contain provisions describing various behaviors which may result in disciplinary action by the Board of Medicine. One of the provisions of which many physicians appear to be unaware relates to restrictions on prescribing amphetamines.

It is in violation of the Board of Medicine Legislative Rules to prescribe, order, dispense, administer, supply, sell or give any drug which is an amphetamine or sympathominetic amine drug or a compound designated as Schedule II controlled substance pursuant to Chapter 60A of The West Virginia Code, to or for any person except for:

1. The treatment of narcolepsy; attention deficit disorder, a behavioral syndrome characterized by inappropriate symptoms of moderate-to-severe distractibility, short attention span, hyperactivity, emotional liability, and impulsivity; or drug-induced brain dysfunction.
2. The differential diagnostic psychiatric evaluation of depression or the treatment of depression shown to be refractory to other therapeutic modalities; or
3. The clinical investigation of the effects of such drugs or compounds when an investigative protocol therefore is submitted to, reviewed and approved by the Board before such investigation is begun.

Complete copies of the West Virginia Legislative Rules, West Virginia Board of Medicine are available from the Board offices at 100 Dee Drive, Suite 104, Charleston, West Virginia 25311. Telephone 348-2921.

Poetry Corner

December's Child
(ambulance ride: Christmas, 1979)

A stricken angel, you look to me,
with celestial hair falling
about your battered face

even now
as I fight your childish efforts
to free your soul
to some higher place
where those whose hands
should touch your face with joy
will never more dash your
skull to numbing fog
I feel your pain.

A fallen princess, you look to me
with presence so calm
and unafraid
as with tubes and drugs
that the Life seeping
from your limp, tiny body
will linger but a few moments
more.

Your face grows yet more peaceful
as your blood pressure falls quietly
into oblivion.
The "whoosh-whoosh" of the
ambu bag
goes unheard
as even the ambulance's
hopeless wail
is drowned by the shriek
which rages up from the guts of my
soul.

Tiny angel child
take what solace you can
as we speed through this icy night,
that another as precious and pure
as you
was also struck down by the hands
of those He loved,
and may all your pain be soothed
as you go now to be with Him.

Donald R. Frey, M.D.
Clarksburg

Ship at Sea

Out where the ocean meets the sky.
Out where screaming seagulls fly,
Out upon the windswept sea
A ship is sailing, sailing free.

Free from cares of the everyday
world,
Free from the throng, the press, and
the crowd;
High on billowing waves she rides
Laughing at mountainous,
whitecapped tides.

Oh, to be free like the ship as she
sails,
Oh, to be free as the men at her
rails;
Out where the ocean air is clean,
Out where the sea is deep and
green.

As I stand on shore and gaze at
the sea
This longing has often come to me;
To be out with salt spray in my
face
And sail to some far distant place.

E. Leon Linger, M.D.
Buckhannon

We request physician contribution to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

AIDS Booklets

Physicians are urged to order for distribution the WVSMA-sponsored AIDS booklets. Some 46,000 booklets are still available at a cost of $15 for a box of 100. More than 47,000 of the booklets have been distributed to school systems, doctors and others.

Contact WVSMA with your order. Telephone 304-925-0342 or 1-800-257-4747.

Former Executive Secretary Dies

William H. Lively

William H. Lively of Charleston, former WVSMA Executive Secretary, died May 11 in a hospital there after a brief illness. He was 57.

Mr. Lively joined the staff of the Association in 1955 after he received a master's degree from the Columbia University School of Journalism. He also received a degree in journalism from West Virginia University in 1954.

Following the death of his father, Charles Lively, who served 20 years in the same position, he was named Executive Secretary in 1961. He also served as Managing Editor and Business Manager of The West Virginia Medical Journal.

During his 20 years of service with the Association, Mr. Lively also was involved in other public health activities and served a term as President of the West Virginia Public Health Association.

Assistant Charleston City Manager at the time of his death, he had served in that capacity under four Charleston mayors. From last November until January, he served as Acting City Manager when Chuck Gardner was appointed Mayor.

Mr. Lively was a member of St. Matthew's Episcopal Church, Charleston; and Rotary Club and Sigma Chi Fraternity. He was a lifelong resident of Charleston.

Surviving are two sons, William H. Lively, Jr., of Charleston and Sidney Lively of Durham, North Carolina; a daughter, Anne North Lively of New Haven, Connecticut; a brother, Charles T. Lively, M.D., of Weston, and two grandchildren.

Part 1. The Diagnostic Problem

Electronic Information For

WILLIAM A. YASNOFF, M.D., Ph.D.
American Medical Association

Editor's Note:
Keeping abreast of the explosive growth of medical information can be overwhelming for physicians. AMA/NET, the AMA-sponsored on-line medical information network offers rapid access to highly relevant medical information wherever a computer terminal, modem and telephone line are located. Following is the first of a series of articles to be published in the *Journal* to inform physicians about this increasingly important method of information transfer.

Physicians have a continual need for information. This is a natural consequence of the overwhelming and increasing quantity of biomedical knowledge required for the practice of medicine today. Traditional sources of this information include colleagues, books, and journals, both in the hospital and office environment.

Thanks in part to the decreasing cost of computer equipment, a new, low-cost, more up-to-date source of information is now readily available to physicians: electronic information. This information may often be more convenient, more current, and more relevant than traditional sources.

This article provides some examples of the types of electronic information which can be useful in addressing physician information needs. It focuses on AMA/NET, the AMA sponsored nationwide medical information network which is now available to physicians throughout the U.S.

I. The Diagnostic Problem

Probably the most common problem that physicians face is making a diagnosis. In the overwhelming majority of cases, the signs and symptoms of a patient's presenting illness are clear and easily recognizable, and the diagnosis is rapidly made. However, there is a small percentage of cases which present puzzling

For immediate sign-up to AMA/NET, Call 1-800-426-2873.

combinations of findings. It is in these cases that physicians traditionally seek the help of colleagues, books and the recent literature.

Colleagues, of course, are an excellent source of information. However, they are not always readily available. Books typically are limited in that their information is at least one year old, and is usually organized by disease, not signs and symptoms. Because of this, a diagnostic hypothesis must be formed before the information is accessible. Even books which focus on signs, symptoms, and differential diagnosis may not provide ready access to information relevant to a specific patient with an unusual combination of findings.

While the recent literature is more current than books, it is also organized by disease and is more difficult to access. Only a limited number of journals can be available in the physician's office. These typically will be organized chronologically,

Physicians: Nationwide AMA/NET

and finding information on a particular topic may be quite time consuming. A well organzied and up-to-date reprint system may compensate for these problems somewhat.

The nearest medical library will undoubtedly have a much more comprehensive collection of journals and also more capabilitites for locating relevant articles, for example, using Index Medicus. However, the library also may not be very convenient for the physician.

How can electronic information help? AMA/NET provides two different types of information which can be of assistance in a diagnostic problem: 1) DxPlain, a diagnostic assistance program, and 2) various methods for searching and accessing the medical literature. The DxPlain system is unique to AMA/NET; it provides patient-specific diagnostic information.

Upon entering DxPlain, information is requested regarding the age and sex of the patient, duration of the problem, and the signs, symptoms, and lab findings associated with this condition. This information is entered in a very natural form with opportunities for correction spelling and other typographical errors. After entering all the information for the patient, DxPlain produces a list of diagnostic possibilities. This list is divided into common and rare diseases, and each disease shown is given a ranking according to the likelihood that it could be responsible for the observed patient signs and symptoms.

DxPlain then will provide explanations describing those signs and symptoms that led to the inclusion of each diagnosis, other findings which are not explained, and additional findings which were not noted but would be expected in that particular condition. Thus, DxPlain can help the physician both to generate and "think through" the differential diagnosis in a puzzling case. It functions as a specialized, patient-specific differential diagnosis reference allowing rapid access to information which can be helpful in the diagnostic process.

NEXT MONTH: The Diagnostic Problem (cont.) and the Therapeutic Problem.

Jacque Leopold, right, instructor for WVSMA's practice management seminars for CPT coding and billing in Charleston June 1 and 2, gets acquainted with two participants, from left, Linda Kelly and Marsha Watts, members of the office staff of Harry D. Fortner, M.D., Logan. Attendance was 40 for the June 1 seminar for all specialties except surgery, and 49 the following day for surgical specialties. Ms. Leopold is a member of the staff of Karen-Zupco & Associates of Chicago.

RVS: An Update

Editor's Note: Reprinted with permission from H.M.S.S. Newsletter, Hospital Medical Staff Section, American Medical Association, June, 1988. (See President's Page, Page 290.)

On July 14, the long awaited report on the National Study of Resource-Based Relative Value Scales (RBRVS) for Physician Services will be submitted by researchers at Harvard University to the Health Care Financing Administration (HCFA), the major funding source for the project. The AMA has been a subcontractor to Harvard in this 30-month study, providing the perspective of medicine through nomination of physician consultants, provision of statistical data and analyses from the AMA's Socioeconomic Monitoring System (SMS), supply of a national sample of physicians from the AMA Physician Masterfile, and ongoing consultation.

Thirty days after Harvard submits the final report to HCFA, the Secretary of Health and Human Services (HHS) must release the report and supporting data to the Physician Payment Review Commission. William L. Roper, M.D., HCFA Administrator, has announced that he intends to release the report to the public at the same time. Release of the report is likely to generate considerable debate and extensive media coverage in both the medical and lay press.

The AMA is now making preparations to conduct a thorough evaluation of the study and its

results. Additional evaluations of the RBRVS will be undertaken by other physician groups, and by a variety of government agencies including HHS, HCFA, and the Physician Payment Review Commission.

The Commission will engage in its evaluation of the Harvard study as part of its overall plan to present to Congress a new Medicare fee schedule system which will employ a resource-based RVS. The Commission stated its preference for using a resource-based RVS in its March, 1988, report to Congress and will present recommendations for an RVS in its March, 1989, report to Congress.

HCFA and HHS will also be evaluating the Harvard report in response to a Congressional mandate to the Secretary of HHS to submit a report to Congress on the implementation issues associated with using a fee schedule. This series of reports is due in 1989.

Congress has mandated the inclusion of 15 additional specialties in a second RVS study. As a result, Harvard expects to begin its second HCFA-funded RBRVS study this summer, which will enable the Secretary of HHS to report to Congress in October, 1989. The AMA has signed a letter of intent with Harvard to play a role in this new study similar to its role in the current study.

Ophthalmologists Elect Officers

New elected officers of the West Virginia Academy of Ophthalmology include Michael A. Fiery, M.D., President, Huntington; E. G. Cadogan, M.D., Vice-President, Fairmont; and Ivan Schwab, M.D., Morgantown, Secretary-Treasurer.

Directors of the Academy are Moseley H. Winkler, M.D., and Samuel A. Strickland, M.D., both of Charleston, and John V. Linberg, M.D., Morgantown.

Robert K. Scott II, M.D., of Ronceverte is immediate Past President, and Harry L. Amsbary, M.D., of Parkersburg is West Virginia's representative on the American Academy of Ophthalmology's Board of Councillors.

Governor Explains Positions

Editor's Note: Following are two letters, dated May 6 and 7, respectively, to WVSMA President Cordell A. De La Pena, M.D., from Governor Arch A. Moore, Jr., relating to his signature of a Medicaid bill, and veto of the bill mandating use of seat belts in automobiles, following the 1988 state legislative session.

Dear Dr. De La Pena:

I wish to express my appreciation to you for your letter regarding my consideration of House Bill 4242, relating to funding of the Indigent Care Fund.

As you know, I signed this important piece of legislation into law on March 8, 1988. This piece of legislation is necessary to bring our system up to date in order to acquire more federal matching funds. It is essential due to the fact that there is a need to ascertain these federal funds for the payment of all our Medicaid health care providers.

Prompt payments to our State's health care providers will benefit our low-income citizens by making sure they receive the best health care possible. The physicians in our State have been a primary link in the chain of providing such a quality service as above mentioned.

I am glad that your fine organization has pledged its support to the Commissioner of Human Services. You can be assured that your input will be given the appropriate consideration by my Administration.

Thank you for your cooperation in this matter. If I can be of any further service to you or your organization, please do not hesitate to contact me.

Sincerely yours,
Arch A. Moore, Jr.
Governor

Dear Dr. De La Pena:

I wish to express my appreciation to you for your recent letter regarding Enrolled Committee Substitute for Senate Bill 8 which requires the use of seat belts in automobiles.

As you know, I vetoed this piece of legislation on March 31, 1988, which is the last day afforded to me by the Constitution of the State of West Virginia. I desired to delay my action on this bill due to my careful evaluation and study, and the substantial Legislative and public outcry on this sensitive issue.

This bill had been termed mandatory seat belt legislation. Claims were made that it would put the State of West Virginia in compliance with federal law regulations; however, this is incorrect. I must point out that the federal government mandates remain somewhat fluid in regard to motor vehicle requirements.

I want you to know that I am deeply concerned for the safety of all of our citizens. However, as seen in this piece of legislation, I feel that there should be improved education in this regard before regulation by our State, and I intend to conscientiously pursue these efforts as Governor.

West Virginians need to be better educated in the future about the benefits of seat belt utilization in order that they may one day willingly accept the responsibility for wearing these life-saving devices. I can only hope that those West Virginians, who oppose these safety devices will join with you and others, who without mandatory requirements utilize them to their fullest extent daily.

The issue of seat belt utilization has engendered great controversy in the West Virginia State Legislature for a number of years. Furthermore, since the day the bill barely passed the Legislature, I was inundated with telephone calls, telegrams, personal messages and letters such as yours expressing opinions regarding Senate Bill 8. A substantial majority were opposed to the legislation as passed.

In further review of Senate Bill 8, its language lends itself to some amount of unfair interpretation. A citizen could only be charged with a seat belt violation after being stopped for another possible offense and there was the possibility for all manner of compliance questions.

(Continued on Next Page)

(Continued from Page 300)

Such possible strained interaction between our citizens and our law enforcement officials would not be beneficial.

I want you to know that I will wholeheartedly continue to encourage the further education of our citizens to the potential safety of utilizing seat belts in everyday driving . . .

Sincerely yours,
Arch A. Moore, Jr.
Governor

Doctors Support Wellness Program

Local physicians are enthusiastic supporters of the pilot, two-year wellness program kicked off in May in Wellsburg, according to W. T. Booher, Jr., M.D., Secretary of the Brooke County Medical Society.

The people of Wellsburg will be among the first in the nation to trade in their cigarettes, fatty foods and poor health habits for an opportunity to improve their heart health as participants in the comprehensive, privately-funded health education program.

Wellsburg, population 11,000, was chosen because of its higher-than-average incidence of heart disease. Factor in Wellsburg's high percentages of cigarette smokers and obesity and you have a community at risk, the program sponsor comments.

Through exercise programs, smoking cessation and weight control classes, and quarterly health screenings, it is hoped the townspeople will be able to reduce their cholesterol count and lower their blood pressure. After two years, what is learned from Wellsburg will be packaged as a model program and offered to small towns across America.

The $4 million pilot program was developed and funded by The Bayer Company.

Doctor Booher said Bayer hired Execu-Fit, a medical advisory group based in San Francisco, to conduct the program including the comprehensive quarterly health screenings of a group of 1,000 people selected for the screenings. "The patients are given the results, and it's up to them to give them to their doctor" when medical problems are revealed, he noted.

He said that he and several other Brooke doctors are serving on a medical advisory panel to work with Execu-Fit.

"The whole town is excited about it and so is the medical profession," Doctor Booher commented.

Doctor Chang New Surgeons' President

Thomas H. Chang, M.D., of Clarksburg was installed in May as the 38th President of the West Virginia Chapter, American College of Surgeons. Doctor Chang is Chief of Surgery at United Hospital Center in Clarksburg.

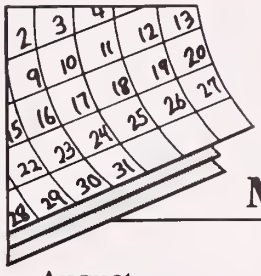
Other officers are Drs. D. Verne McConnell, Wheeling, First Vice President; Eric P. Mantz, Charleston, Second Vice President; Roger E. King, Morgantown, Secretary/Treasurer, and Herbert E. Warden, Morgantown, Governor.

Award 'Ribbon' On Journal Cover

In case readers haven't noticed, the small "ribbon" drawing which has been added to the front cover of the *Journal* beginning with this issue, denotes the special award won by the *Journal* in March in the 13th annual medical journalism competition conducted by Sandoz Pharmaceuticals.

The award, announced in the April issue of the *Journal*, was for outstanding design and editorial qualities.

As reported in April, other publications receiving the special awards of $250 each were the Journal of the Medical Association of Georgia, Pennsylvania Medicine, Pima County Medical Society (Tucson, Arizona), San Francisco Medicine, Wisconsin Pharmacist, Riverside Health Group (Toledo, Ohio), and New York Medical College (Valhalla, New York).



Medical Meetings

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

10—CNA First Generation Loss Control Seminar, Huntington.

14-16—Am. College of Nutrition, New Orleans.

15-18—Am. College of Nuclear Medicine, Lake Tahoe, Nev.

21—CNA Second Generation Loss Control Seminar, Wheeling.

22-24—Am. Academy of Facial Plastic & Reconstructive Surgey, Washington, DC.

23-30—Am. College of Radiology, Cincinnati.

25-28—Society of Thoracic Surgeons, New Orleans.

25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.

26-29—Am. College of Emergency Physicians, New Orleans.

October

3-6—AAFP, New Orleans.

3-7—Am. College of Chest Physicians, Anaheim, Calif.

8-12—Am. Academy of Ophthalmology, Las Vegas.

8-12—Am. Society of Anesthesiologists, San Francisco.

12—CNA Second Generation Loss Control Seminar, Beckley.

13-16—Am. Society of Internal Medicine, Atlanta.

14-19—Am. College of Gastroenterology, New York.

23-26—Medical Group Management Assoc., Kansas City, Mo.

November

6-9—Southern Medical Assoc., New Orleans.

December

4-7—AMA Interim Meeting, Dallas.

1989

March

17-19—22nd Mid-Winter Clinical Conference, Huntington.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Project to Help Women, Children

An innovative project to improve the health of low-income women, infants and children in 15 West Virginia counties has been funded by a $1,473,931 grant from the W. K. Kellogg Foundation of Battle Creek, Mich.

The four-year demonstration project will link the resources of rural communities, WVU Health Sciences Center, WVU Extension Service and state government. They will work together to address a complex set of problems including inadequate prenatal care and nutrition, a high proportion of infants with health problems, increasing infant mortality, teen pregnancy with a resultant high drop-out rate from schools, and a high cardiovascular disease rate.

"We at WVU have outstanding expertise and human resources to commit to this important community-based project, and we are determined to do everything we can to make it succeed," said WVU President Neil S. Bucklew.

"But if the project is to have a long-term impact, WVU, the state health department and the Kellogg Foundation must serve primarily as catalysts, enabling the rural communities to make more effective use of the resources they have."

Regions Covered

Two regions are covered by the project:

The six-county region served by the Mid-Ohio Valley Health Department, including Calhoun, Pleasants, Ritchie, Roane, Wirt and Wood counties;

The nine-county region served by the Southern West Virginia Regional Health Council, including Fayette, Logan, McDowell, Mercer, Mingo, Monroe, Raleigh, Summers and Wyoming counties.

While the problems targeted by the study are especially prevalent in the two regions, the entire state suffers a high incidence of such problems, according to Bill Carlton, WVU Professor of Community Medicine. Doctor Carlton is project manager and co-prinicpal investigator, along with Marian Swinker, WVU Associate Professor of Family Medicine. The project's principal investigator is Michael Lewis, Associate Professor and Chair of the WVU Department of Family Medicine.

Economic troubles in West Virginia have exacerbated the health problems of mothers, infants and children, adding new stresses to the economic, medical and social resources of the communities and the state.

"More than half the pregnant women in West Virginia live below the poverty line. West Virginia also leads the nation in births to unwed white mothers under 18 years of age," Carlton said.

"Many of these women get little or no prenatal care and don't eat properly. All too often, the children are born prematurely or have low birth weights—factors that are directly related to the rising infant mortality rate in our state.

Downward Spiral

"We're faced with a downward spiral: As West Virginia's economy continues to struggle, more young women are having children, and many of these children have health problems . . .

"We've simply got to break that cycle."

Vital to the success of the project will be multidisciplinary teams of family medicine physicians, nurses, pharmacists, health educators, behavioral scientists, nutritionists and other professionals from WVU Health Sciences Center, including its Charleston Division. These teams will make bi-monthly visits to rural clinics to consult with local health care providers and help with education and patient screening efforts.

"One of the problems we are concerned about is diet, including obesity, high serum cholesterol levels and high salt and fat intakes in women and children," Doctor Lewis said.

"These problems contribute to the high prevalence of heart disease, diabetes, hypertension and cancer. In West Virginia, the death rate from cardiovascular disease far exceeds the national average. We hope that by identifying children who are at risk and by raising their awareness of the importance of good nutrition practices we can make a long-term impact on their health."

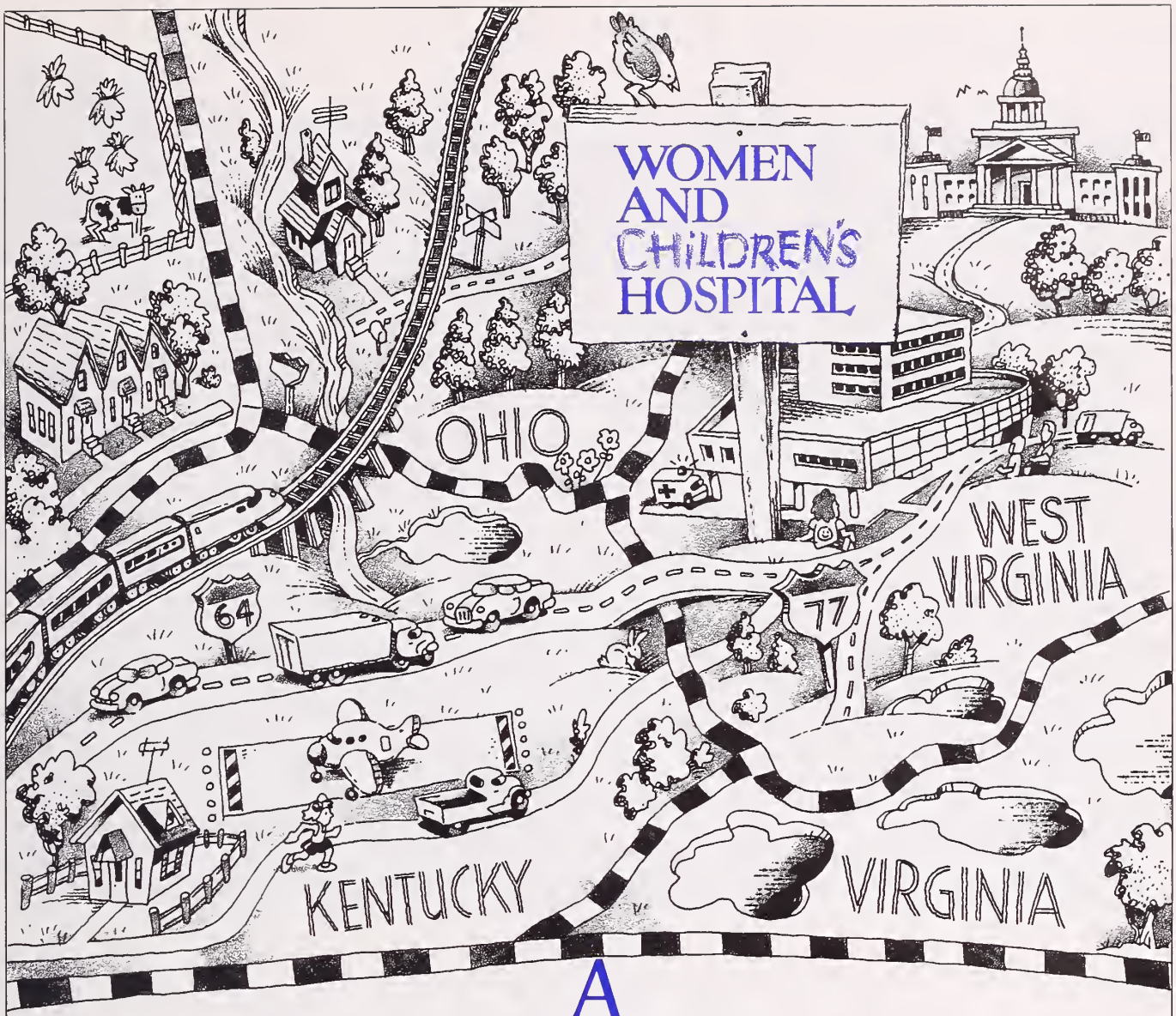
'Mini-Residencies' Offered

WVU's Office of Continuing Medical Education will offer a range of programs for rural health care providers in the 15 counties. "Mini-residencies" of up to one month will be available at the WVU Health Sciences Center in Morgantown and at the Charleston Area Medical Center for physicians who want to improve their skills, especially in areas relating to the health needs of pregnant women, infants and young children.

In rural clinics and schools, multidisciplinary teaching teams will offer workshops. "Local health care professionals will be important members of these teaching teams," Doctor Lewis said.

Professionals from WVU, CAMC, the state Department of Health and the communities also will conduct educational programs in schools aimed at improving nutritional habits and reducing teen pregnancy. School nurses will be actively involved in these programs, and project nutritionists will work with school cooks to plan meals.

The project began July 1. If successful in the 15 pilot counties, it could be developed statewide.



A HEALTHY NEW SIGN IN WEST VIRGINIA

The road to recovery runs both ways. Proof of that is the new Women and Children's Hospital of West Virginia. A healthy new sign for us all.

Women and Children's is a specialized facility of Charleston Area Medical Center devoted exclusively to the physical and emotional needs of women and children. And a new referral source for you, the doctors who care for them. A source for tertiary and specialized care for women and children, the 120-bed hospital offers many types of care found nowhere else in West Virginia.

State-of-the-art technology combines with specialists and sub-specialists in fields such as:

• Infertility • Perinatology • Neonatology • Pediatric cardiology, hematology, oncology, nephrology

We value your referrals for consultation or tertiary services. And we invite you to take a tour of our hospital. To arrange a tour, or for more information, call our administrator, Shirley Perry at (304) 347-9233.

WOMEN
AND
CHILDREN'S
HOSPITAL

Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

MU to Take Part In Kanawha Survey

School of Medicine researchers will collaborate with Harvard University and the University of New Mexico on a survey designed to identify the respiratory and other health problems of Kanawha County School children as part of a project by the National Institute for Chemical Studies.

"The project as a whole is looking at a number of things surrounding the potential effects of chemical emissions," said Dr. Gregory Wagner, Director of Marshall's Occupational and Environmental Health Resource Center.

"At Marshall, we'll be working specifically with the health survey, which we expect to distribute to children in two or three grades of all 74 Kanawha County public elementary schools," he said. "We'll probably distribute the survey to between 6,000 and 10,000 students, who will take it home for their parents to complete."

Marshall researchers and others are working now to develop the survey, which will examine respiratory health and assess symptoms relating to allergic responses and reactions to irritants. The school also will be directly involved in the survey's administration, analysis and interpretation.

Doctor Wagner said that air monitoring results gained through another part of the NICS project will be used in the interpretation of the survey.

"Ultimately, we hope through the air monitoring to be able to identify areas in the Kanawha Valley with greater or lesser exposure to emissions," he said. "We hope to be able to compare the health status of children with higher exposure to that of children with lesser exposure.

"Also, for a number of questions on the survey we have data from other areas, and we plan to compare the Kanawha Valley children with these other children."

NICS Director Larry Bissett said the overall NICS project, which will also include tumor and birth defects surveillance programs, is funded by a $377,000 grant from the Environmental Protection Agency.

"With this study we expect to address questions that are important to our community, such as whether or not measurable differences in people's health exist as a result of living in close proximity to chemical plants, and whether those differences, if they exist, can be related to exposure to chemical emissions," Bissett said.

School of Nursing Dean Announced

Doctor Carolyn S. Gunning of the University of Texas Health Science Center at San Antonio has been named the new Dean of the Marshall University School of Nursing, Lester R. Bryant, M.D., MU Vice President for Health Sciences, announced.

Doctor Gunning, who will assume the position at Marshall this summer, succeeds Giovanna Morton, R.N., who has been serving as Acting Dean.

Currently Associate Dean for the undergraduate nursing program at UT-San Antonio, Doctor Gunning has held a variety of teaching and administrative positions since joining the school's faculty in 1973.

"Doctor Gunning clearly has the characteristics of leadership necessary for the position, and she is a progressive thinker in nursing education," Doctor Bryant said. "She gained the respect of her own colleagues at San Antonio, who recommend her highly.

"She brings the talent, enthusiasm, and creativity we need to take our School of Nursing to its next level, which is a firming of the base for our four-year nursing program and the development of a master's degree program," he said.

In addition to her work at the University of Texas, Doctor Gunning is a major in the Texas Army National Guard and is Chief Nurse for the 217th Evacuation Hospital. She began her career as a staff nurse at Methodist Hospital in Houston.

News in Brief

- The School of Medicine has become involved in the clinical training phase of students in the Alderson-Broaddus physicians' assistant program. In the first year of the agreement, 10 A-B students are expected to complete two months of rotations with third-year medical students.
- At the National Student Research Forum in Galveston, Texas, Marshall student Laurie Scott, a candidate for the Ph.D. degree in biomedical sciences, won the Burroughs-Wellcome Award for excellence in the area of toxicolgy. Medical Students Clint Sutherland and Gregory Hale also were selected to make presentations at NSRF meetings in Galveston and Miami.
- Two School of Medicine students have been awarded scholarships to participate in the J.M. Foundation Medical Student Scholarship Program in Alcohol and Other Drug Dependencies, offered at Wright State University. This is the second consecutive year MU students have been selected for this program.
- During the 1988 Doctoral Investiture, graduating seniors inducted Dr. Renata Kadzielawa into their Outstanding Instructor Hall of Fame.
- Dr. Ofelia Marin, a resident in the Department of Surgery, presented a paper at the May 7 meeting of the West Virginia Chapter of the American College of Surgeons. Her paper described two infants with unusual abnormalities of the esophagus who were referred to Marshall's pediatric surgical service in 1985 and 1987.

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Obituaries

HENRY S. MULLENS, M.D.

Dr. Henry S. Mullens, Kenova family physician since 1947, died April 30 in a Huntington hospital. He was 68.

Doctor Mullens was on the staffs of St. Mary's and Cabell Huntington hospitals.

A native of Kenova, he was graduated from West Virginia University, and received his M.D. degree in 1943 from the University of Louisville. He interned at St. Mary's Hospital.

Doctor Mullens was a member of the Norval Carter Medical Society; West Virginia Chapter, American Academy of Family Physicians; Southern Medical Association, Cabell County Medical Society, West Virginia State Medical Association and American Medical Association.

He was a World War II Army veteran.

Survivors include the wife, Mrs. Lillian M. Mullens; one son, the Rev. Larry S. Mullens, Kenova; three sisters, Esther Wetzel and Evalee Byer, both of Huntington, and Stella Byer, Kenova; and one brother, John W. Mullens, Dickson (Wayne County).

ANDREW J. WEAVER, M.D.

Dr. Andrew J. Weaver, retired Clarksburg surgeon, died April 30 in a hospital there. He was 81.

Doctor Weaver, born in Mebane, North Carolina, served two terms on the Council of the West Virginia State Medical Association in 1965-69, and was President of the Harrison County Medical Society in 1962.

He was graduated from Wake Forest College, and received his M.D. degree in 1933 from Jefferson Medical College. He completed postgraduate work at Union Memorial Hospital in Baltimore and at North Dakota State Hospital.

Doctor Weaver was a member and past President of the medical staff of the former St. Mary's Hospital and at the former Union Protestant Hospital in Clarksburg, and served as Chief of Surgery at both hospitals. He also served as Chief of Surgery during the planning and

(Continued on Page 317)

New Members

The following physicians and students were welcomed in May as new members of the West Virginia State Medical Association:

Cabell

Thomas E. Dannals, M.D., Carl Johnson Medical Center, 307 5th Avenue, Huntington 25702, Family Practice

M. Kathryn Hammock, M.D., 2501 3rd Avenue, Huntington 25703, Neurosurgery

Mercer

John E. Van Gilder, M.D., 500 A. Cherry Street, Bluefield 24701, Internal Medicine/Cardiology

Dana Otmar Olson, M.D., 2129 Hemlock Hill, Bluefield 24701, Nuclear Medicine/Diagnostic Radiology

William J. Willems, M.D., 824 Rockbridge, Bluefield 24701, Obstetrics/Gynecology

Mingo

Anbu K. Nadar, M.D., PO Box 1479, Williamson 25661, Orthopedic Surgery

Monongalia

Mario C. Battigelli, M.D., WVU Medical Center, Department of Medicine, Morgantown 26506, Internal Medicine

Mark R. Bennett, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506, Anesthesiology

Stanford J. Huber, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506, Anesthesiology

William D. Ramsey, M.D., WVU Medical Center, Department of Surgery, Morgantown 26506, Surgery/Emergency Medicine

Residents

John Lee Goad, M.D., 3205 Virginia Avenue, Charleston 25304

Geoffrey Lee Ruben, M.D., Bon Vista Apartments, F-5, Morgantown 26505

Students

Whitney R. Calkins, Apartment 3, 1225 8th Street, Huntington 25701

Debra I. Mills, 2506 1st Avenue, Huntington 25703

Some People Commit Child Abuse Before Their Child Is Even Born.

According to the surgeon general, smoking by a pregnant woman may result in a child's premature birth, low birth weight and fetal injury. If that's not child abuse, then what is?

AMERICAN CANCER SOCIETY

ARMY RESERVE MEDICAL PROFILE NO.7

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

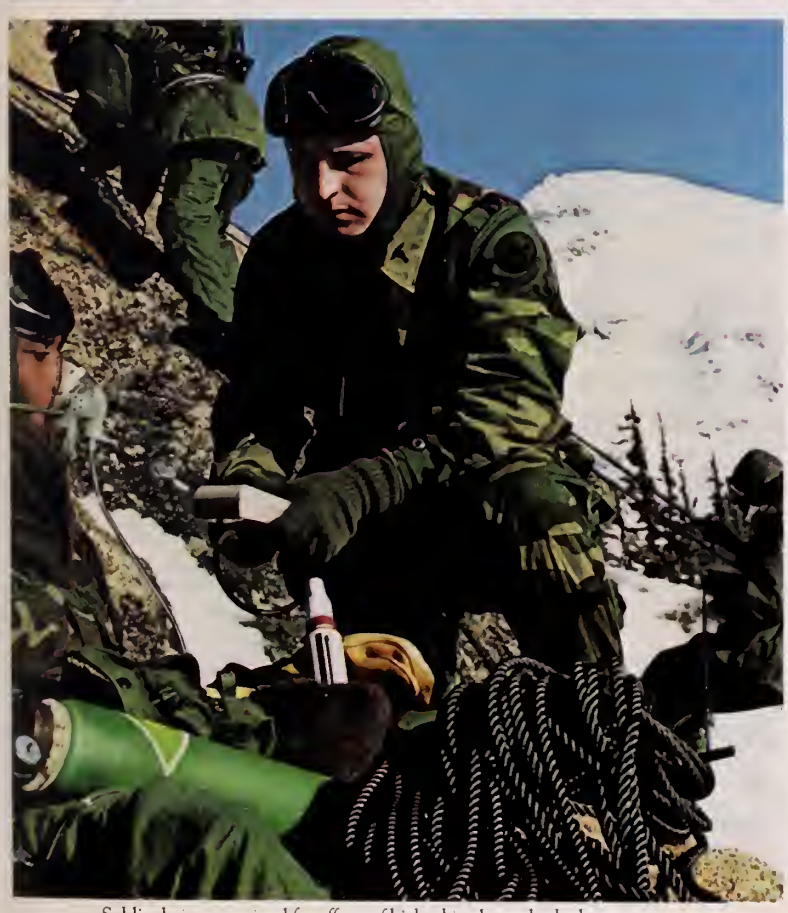
OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.



Soldier being examined for effects of high-altitude cerebral edema.

ARMY RESERVE MEDICINE. BE ALL YOU CAN BE.

A NEW H_2 Antagonist

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Effective once-nightly
duodenal ulcer therapy available in a

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for better patient compliance

AXID®
nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively. PV 2091 AMP [041288]

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INDICATIONS AND USAGE: BECAUSE OF REPORTS OF INTESTINAL AND GASTRIC ULCERATION AND BLEEDING WITH SLOW-RELEASE POTASSIUM CHLORIDE PREPARATIONS, THESE DRUGS SHOULD BE RESERVED FOR THOSE PATIENTS WHO CANNOT TOLERATE OR REFUSE TO TAKE LIQUID OR EFFERVESCENT POTASSIUM PREPARATIONS OR FOR PATIENTS IN WHOM THERE IS A PROBLEM OF COMPLIANCE WITH THESE PREPARATIONS

1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis
2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states
3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics, see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS,** and **OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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Where reference is made to generically designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

A short abstract summarizing the manuscript should be included. This should be typed in double space on a separate page.

Authors are requested to submit a copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawingsand charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 x 7 in. in size. Cost of printing black and white photos in excess of 4 will be billed to author, and no more than 25 references will be published free of charge to the author. A legend should be provided for each illustration and, preferably, attached to it.

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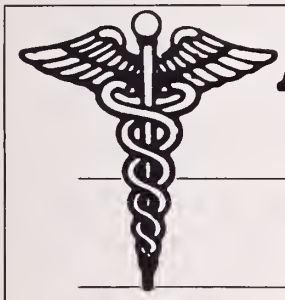

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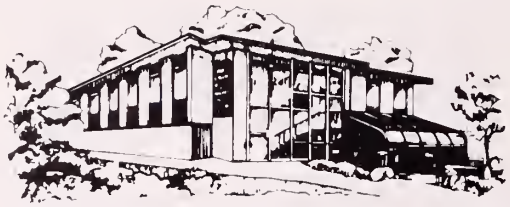

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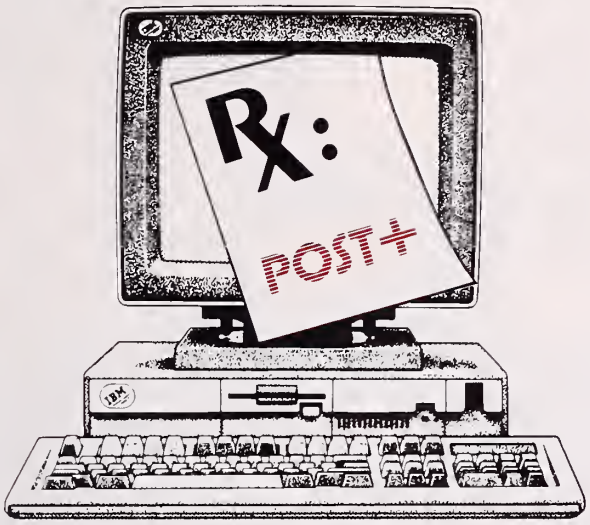

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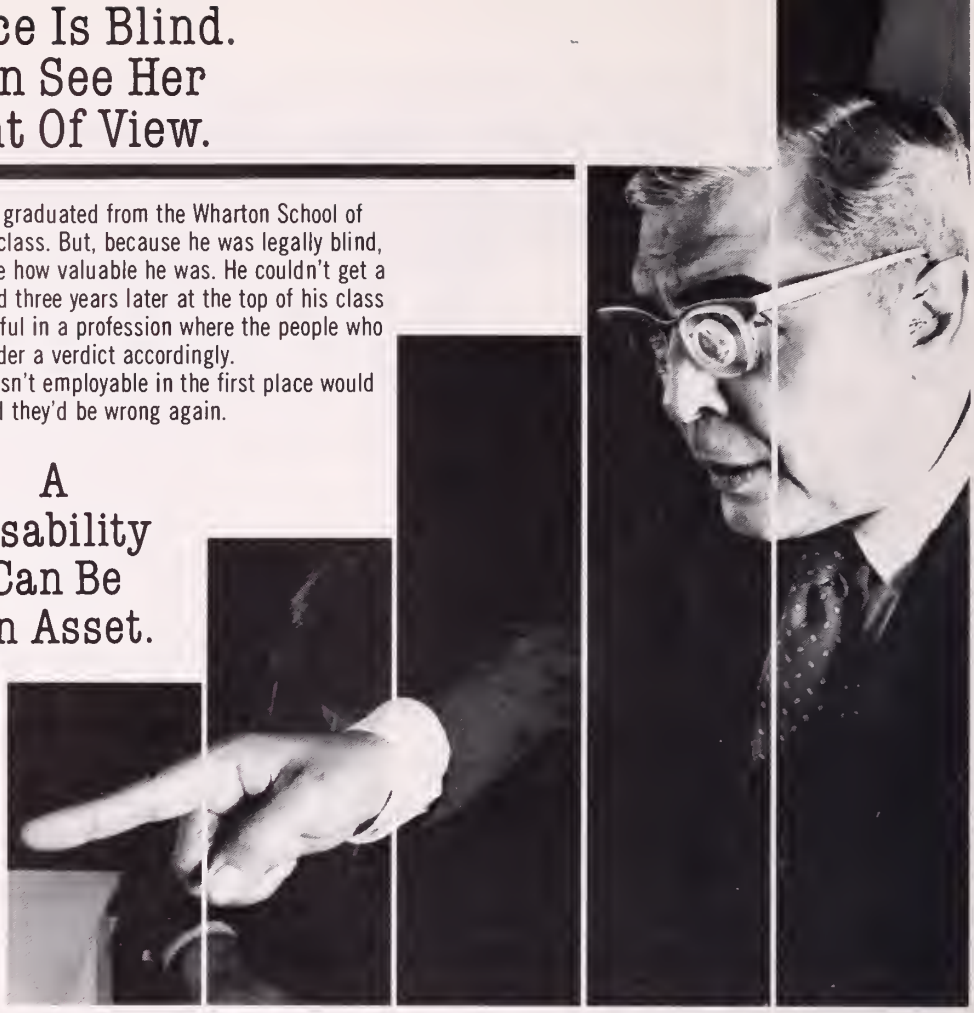

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Obituaries—Continued

construction of the present United Hospital Center in Clarksburg.

Doctor Weaver was a member of the Southern Medical Association, Fellow of the American College of Surgeons, a Fellow of the Southeastern Surgical Congress, and an honorary member of the Harrison County Medical Society, West Virginia State Medical Association and American Medical Association. Doctor Weaver was a Navy veteran of World War II, and was awarded the Bronze Star.

Survivors include the wife, Alvina Josephine Weaver; three sons, Andrew J. Weaver of Houston, Texas; Allan J. Weaver of Annapolis, Maryland, and Michael B. Weaver of Clarksburg; one daughter, Julia J. Weaver of Frederick, Maryland; and two sisters and one brother, Ann W. Finefrock, Lillian W. King and Sheraton Weaver, all of Mebane.

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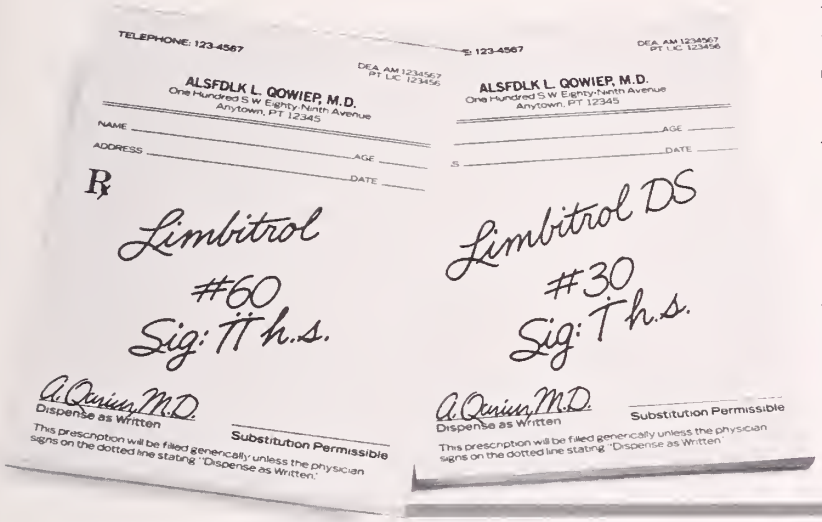

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Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregulanties in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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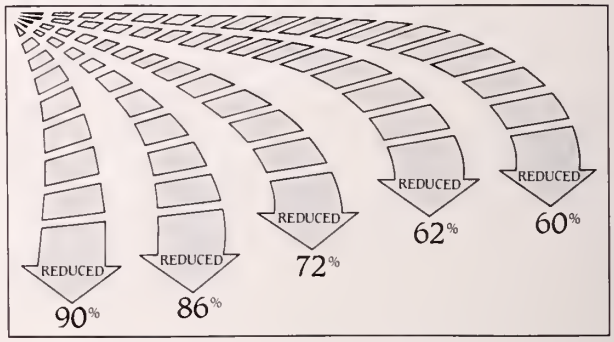

*Patients often presented with more than one somatic symptom.

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West Virginia Medical JOURNAL

August 1988 West Virginia State Medical Association Volume 84 No. 8

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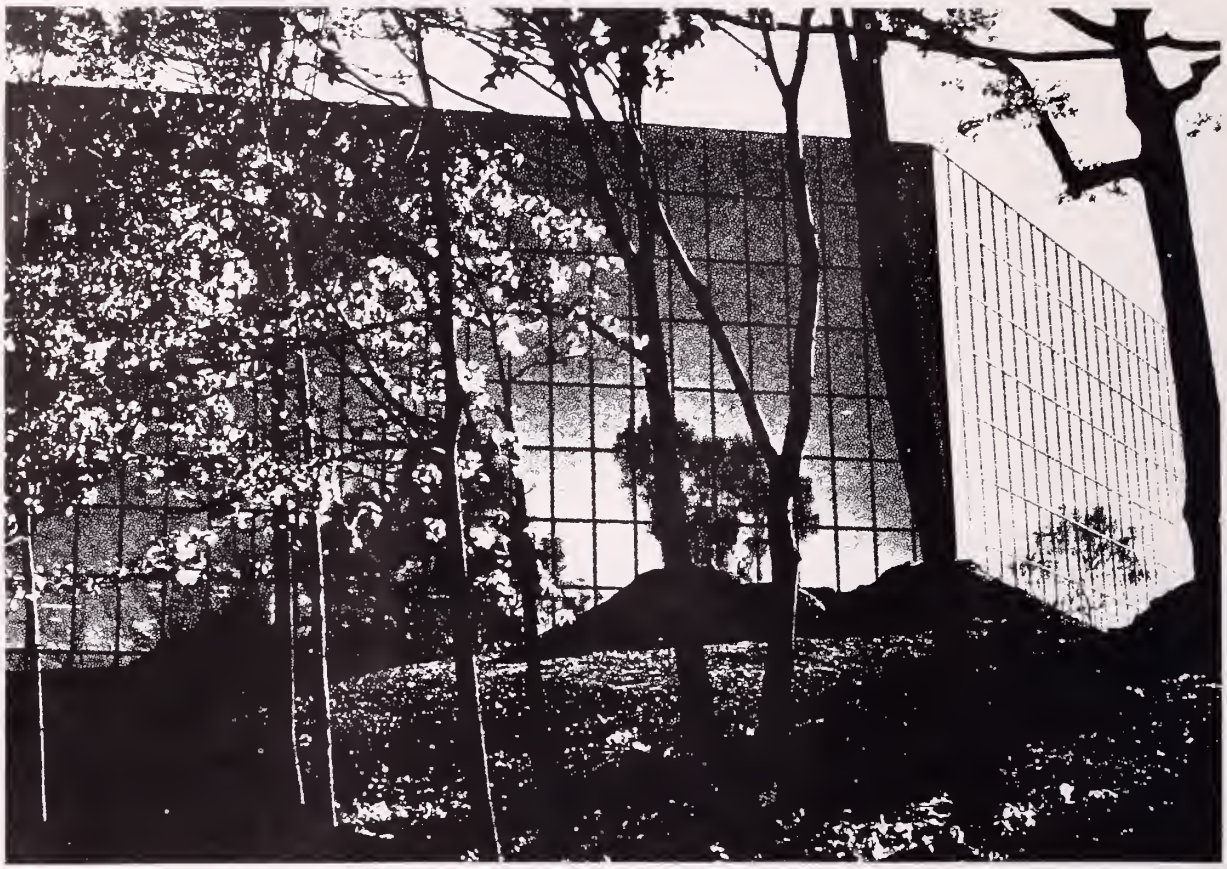

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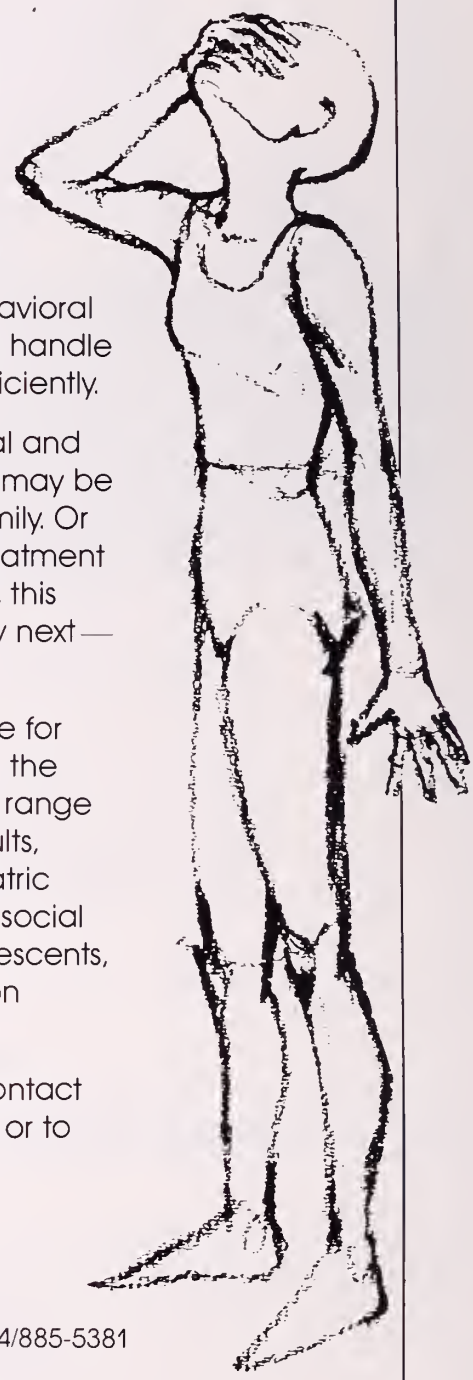

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BRIEF SUMMARY
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INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri** and *Shigella sonnei** when antibacterial therapy is indicated

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known; once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General:

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired; concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness, therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C:

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers:

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg *B.I.D.*
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg *B.I.D.*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D.*
	Severe/Complicated	500 mg *B.I.D.*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.I.D.*

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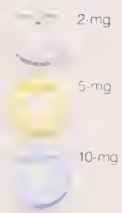

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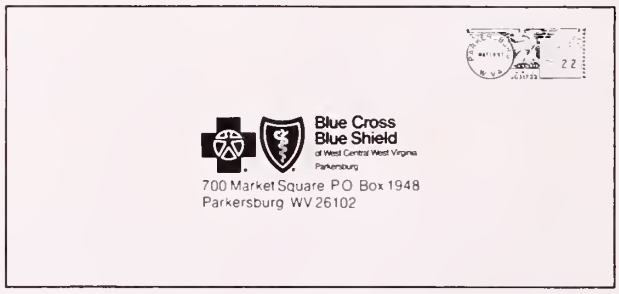

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Virulent Diverticulitis: A Pitfall for the Unwary

JOHN H. MAHAN, M.D.
Department of Surgery, Ohio Valley Medical Center, Wheeling, West Virginia

Diverticulitis varies in severity from an easily managed inflammation of the colon wall to a relentless process frequently extending below the peritoneal reflection and presenting a lethal threat to the patient, as well as a therapeutic challenge to the surgeon. There has not been evidence linking it to granulomatous bowel disease, and a specific pathogen as an etiologic factor has not been identified. Three patients are added to the literature who displayed the features of this entity.

Diversion of the fecal stream, or resection with anastomosis fails to interrupt the progression of the disease, and resection with end colostomy where technically possible is the treatment of choice.

Sigmoid diverticulitis is, for the most part, a predictable disease. A segment of the colon containing diverticuli develops inflammation leading to a phlegmon involving pericolic tissues, and occasionally develops free perforation into the abdominal cavity. Management is dictated by the clinical and radiologic features of the disease in the individual patient, and may range from antibotic therapy with the bowel at rest to emergency or elective resection, with or without anastomosis. The bowel is otherwise healthy, and normal healing takes place.

A small number of these patients behave differently. Inflammation persists after operation, anastomoses fail with resultant abscesses or fistulae, and continuity cannot be safely restored. Diversion of the fecal stream does not produce quiescence of the inflammatory process. These patients appear to represent one end of a severity spectrum in diverticular disease where morbidity and mortality can be forbidding. Herein is a report of three patients who fit this category of a more virulent disease process.

Patient #1

A 74-year-old female presented with a pelvic abscess producing left ureteral obstruction. She subsequently underwent drainage of the abscess with resection of the sigmoid colon, end colostomy, and closure of the distal stump. The abscess cavity contents grew out E. Coli. The specimen revealed edematous but otherwise normal mucosa. There was some fibrous replacement of the muscular layers and marked serosal inflammation.

> ***"Whether this is a particularly severe variant of diverticulitis or undetected inflammatory bowel disease remains in question."***

She had occasional complaints of lower abdominal pain postoperatively, but without clinically significant findings. She underwent proctoscopy and colonoscopy through the end colostomy with unremarkable findings.

Six months after the resection, she was explored to reestablish continuity. She was found to have an active inflammatory process involving the rectum and extending below the peritoneal reflection with edema, induration, and fibrosis in the perirectal tissues. Her colostomy was reestablished, and she has done well since, a period of four years.

Patient #2

A 74-year-old female with severe rheumatoid arthritis presented with signs of an acute inflammatory process in the left lower quadrant and evidence of a colo-vaginal fistula. She underwent a divided transverse colostomy and sump suction placement in the area of the phlegmon.

Cultures grew E. Coli. Postoperative sigmoidoscopies revealed a normal mucosa. Despite fecal diversion she had an episode of fever and pain in the lower abdomen four and a half months later. This was successfully treated with antibiotics. Eleven months after her first operation, resection of the sigmoid and fistula was carried out, with a satisfactory end-to-end anastomosis. Two diverticuli with apparent old perforations were noted. Microscopically, the mucosa was normal with some fibrosis and chronic inflammatory cells in the bowel wall. A pericolic fistula developed at the anastomosis and persisted despite the protective colostomy.

Nine months later she was reexplored and a large sterile collection was drained. Diffuse chronic inflammation was noted in the pelvis. The anastomosis would not heal, and she died three years later of unrelated causes.

Patient #3

A 72-year-old female with a three-year history of intermittent, left lower abdominal pain entered with signs of left colon obstruction. Thirteen months prior to admission, she had undergone colonoscopy

for her symptoms, with removal of a tubular adenoma at 18 cm. No other mucosal abnormalities were noted.

She was treated by rest for the G.I. tract and broad spectrum antibiotics, and over a period of 10 days the signs and symptoms of obstruction disappeared. She underwent colonoscopy which demonstrated a normal mucosa throughout, but with a narrowed segment at 30 cm. She subsequently underwent resection of the involved segment with a satisfactory end-to-end anastomosis. Pathologic examination of the specimen revealed chronic granulomatous inflammation in the submucosa and serosal fat.

She did well for approximately one week, and then began to develop signs of sepsis. A CT scan ultimately revealed the presence of a pelvic abscess, and she was reexplored. Anastomotic dehiscence was demonstrated and this area excised. The rectal stump was closed and proximal colostomy formed. Cultures at this time revealed pseudomonas aeruginosa and no anaerobic growth. She expired of sepsis and cerebrovascular complications.

Discussion

These patients appear to be part of a subgroup of chronic inflammatory disease, with the clinical and pathologic features of diverticular disease, but who exhibit a relentless course of inflammation despite usually effective therapy. Morgenstern et al. (1) described 17 patients with diverticulitis of a virulent nature, characterized by fistula formation, extension of inflammation below the peritoneal reflection, and involvement of other pelvic structures. Thirteen of these patients had significant postoperative morbidity, and three died. Nine of the 12 patients who had resections developed anastomotic leaks. In an editorial (2) the concept of a "malignant" diverticulitis is questioned, and Morgenstern's series is criticized for the lack of endoscopic reports and cultures of the innflammatory process.

Schmidt et al. (3) presented 26 patients with combined diverticulitis and Crohn's disease of the sigmoid colon. This was confirmed by examination of the resected specimen in 14 and by rectal biopsy in 12. Twenty-four of these patients had an anal lesion or a recto-vaginal fistula, and in 23 there were abnormal sigmoidoscopic findings.

Tchirkow et al. (4), discussing Crohn's disease in the elderly, described eight patients operated upon for suspected sigmoid diverticulitis, who subsequently proved to have Crohn's disease. Of the four operated upon initially at the Cleveland Clinic, one treated with loop-colostomy, and two with sigmoid resection and anastomosis, developed fever diarrhea and persistent pain. These patients were characterized preoperatively by persistent diarrhea, blood and pus per rectum, and weight loss.

"The three patients presented here had three different surgical approaches, and only the one with resection and end-colostomy had a satisfactory outcome."

In contrast to those patients who ultimately proved to have Crohn's disease, the three patients reported here did not have rectal discharge and weight loss as presenting symptoms. None had anal lesions or recto-vaginal fistulas. Endoscopic and pathologic examinations of the rectum and sigmoid failed to produce evidence of granulomatous disease, and cultures were all unremarkable. Whether this is a distinct variant of diverticular disease or simply represents undiagnosed granulomatous disease of the colon remains in question.

In practical terms, it would seem prudent, in the emergency situation in the elderly patient without stigmata of Crohn's disease, to carry out a resection and end-colostomy. This is not technically feasible in some of these patients because of the intense inflammation in the pelvis, and one must settle for diverting colostomy. Rectal biopsy, endoscopy, and pathologic examination may reveal granulomatous disease, and appropriate therapy instituted.

The three patients presented here had three different surgical approaches, and only the one with resection and end-colostomy had a satisfactory outcome.

Conclusion

Three patients are added to the literature of what appears clinically to be a virulent form of diverticulitis. Diversion of the fecal stream is not curative, and resection and anastomosis are fraught with hazard. No evidence of granulomatous disease was found, and the presenting pictures were not characteristic of Crohn's disease. Whether this is a particularly severe variant of diverticulitis or undetected inflammatory bowel disease remains in question. In the emergency situation, resection of the sigmoid with end-colostomy appears to be the treatment of choice.

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For Stage I Cervical Carcinoma

Rare Case of Solitary Rib Metastasis Nine Years After Radiotherapy

PURENDRA P. SINHA, M.D.
Associate Professor, Department of Radiation Oncology, West Virginia University Health Sciences Center, Morgantown

A solitary rib metastasis nine years after successful radiotherapy treatment for Stage I carcinoma of the cervix is extremely rare. Fifty per cent of the distant metastases usually develop within one year, and 90 per cent of them appear within five years after treatment. The most common sites for appearance of distant metastases in the skeletal system are pelvic bones and spine, either because of direct extension of the tumor or by extension from the involved lymph nodes. Involvement of the bones by hematogenous route is less common. The rib metastases are usually part of very widespread metastatic disease.

Reported here is a rare case of bone metastasis in a single rib that developed nine years after successful radiotherapy for Stage I carcinoma of the cervix.

Case Report

A 58-year-old, white female (para II, gravida II) who had her last menstrual period at age 44, presented in August of 1976 with a one-month history of vaginal bleeding. A pelvic examination demonstrated an exophytic carcinoma involving the anterior lip of the cervix. A biopsy was taken which was reported as infiltrating, poorly differentiated, non-keratinizing, large cell-squamous cell carcinoma.

An examination under anesthesia revealed that the only site of involvement was the anterior lip of the cervix. There was no involvement of the vagina, fornices or parametria. Chest x-ray, IVP, complete blood counts, electrolytes, cystoscopy and proctoscopy were within normal limits. The patient was staged as IB according to FIGO Staging System and also by AJC Classification.

She was treated with a course of radiation therapy consisting of Cobalt-60 external radiation by the four-fields pelvic box technique to a dose of 5,000 rads in 25 fractions over a period of 40 days. Three weeks after the completion of external radiation therapy, she received a standard Fletcher-Suit pelvic after-loading system consisting of a tandem and two medium-size ovoids. The tandem was loaded with 30mg Radium equivalent Cs-137 sources (each 10mg), and each colpostat was loaded with 15mg Cesium sources. The patient had a total of 60mg Cs-137 for 70 hours which gave a dose of 3,500 rads to two cm above and two cm lateral to the external OS (point A). Computerized isodose prints were obtained to show the various dose rates at different points on the fornices, parametria, vagina, bladder and rectum.

"One of the significant features common to most of the patients who develop bone metastases is the poor differentiation of the carcinoma."

The patient had no acute undue side effects of radiation therapy such as nausea, vomiting, diarrhea or leukopenia. She was followed at three-month intervals for the first three years and then twice a year. She had no symptoms nor did she develop any sign of recurrence or late radiation reaction such as subcutaneous fibrosis, intestinal obstruction or fistulation.

Nine years after the initial radiation therapy, she presented with pain in the right lower ribs. She had no other symptoms. Chest x-ray and x-rays of the ribs demonstrated a single osteolytic lesion in the right 10th rib. There was no acute process in the lung parenchyma. A bone scan demonstrated a solitary area of increased uptake in the right 10th rib. The remainder of the skeletal system did not reveal any other area of increased uptake. A complete physical examination was normal except for tenderness over the right 10th rib. A pelvic examination demonstrated no abnormality. Fornices and parametria were clear. A routine PAP test revealed no malignant cells. A complete E.N.T. examination was normal.

On 07/18/85 the patient underwent removal of the right 10th rib. There was a single area of disruption of the bone with focal hemorrhage. The pathology report was squamous cell carcinoma. The previous biopsy of the cervix was reviewed and the histopathological features of the rib and the old biopsy from the cervix were found to be similar. The patient was further treated with 5,000 rads in 25 fractions to the right 10th rib bed with adequate margins which included the 9th rib as well as the 11th rib. She tolerated this treatment very well. There were no significant side effects from the radiation therapy.

The patient is doing very well two and a half years after this treatment. There has been no evidence of recurrence of the primary carcinoma, nor did she develop any other metastases.

Discussion

Approximately 15 per cent of patients develop distant organ metastases after radical therapy for carcinoma of the cervix. Carlson (3) reported 15.3 per cent (341 of 2,220), and Bassan (1) reported 16 per cent (14 of 88) patients who developed distant metastases after therapy of the primary carcinoma. About two thirds of such patients have involvement of multiple organs, and only one third have involvement of a single organ. Most of the metastases develop in the

lungs. Involvement of the skeletal system alone is not common. Carlson (3) noted 18 of 110 patients, and Bassan (1) reported seven of 88 patients who had metastases exclusively in the skeletal system. The most common bones involved by cervical carcinoma are the pelvic bones and the spine. Such involvememt is either by direct extension or by extension from the involved lymph nodes. Skeletal metastases by blood stream is not as common as by direct extension. Blood-borne metastases in the skeletal system involve mostly the long bones, skull and scapula.

A vast majority of the bone metastases present as osteolytic lesions on radiographic examination. Blythe (2) found only one of 55 patients having osteoblastic metastasis. Localized bone pain is the most common symptom. Forty-four of 55 patients (90 per cent) of Blythe (2) had localized bone pain at the site of the metastasis.

One of the significant features common to most of the patients who develop bone metastases is the poor differentiation of the carcinoma. Thirteen of 14 patients reported by Bassan (1) had poorly differentiated squamous cell carcinoma.

The development of distant metastases is related to the initial stage of the disease. The incidence is lower for Stage I but is much higher for Stage IV carcinoma. Carlson (3) grouped 14 of 59 patients (24 per cent) as Stage IV disease because they had local extension of the tumor to the bladder or rectum, and developed distant metastases. On the other hand, 17 of his 231 patients who developed secondary metastases in distant organs had Stage I carcinoma, and only three of those patients had a single-organ metastasis. Fifty per cent of the patients who develop skeletal metastases also have persistence or recurrence of the primary cervical carcinoma.

The prognosis of patients with bone metastasis is ominous. Ninety-six per cent of Blythe's patients died within 18 months (2).

Summary

Our patient was diagnosed initially as having Stage I carcinoma of the cervix. She remaned disease free for nine years after treatment, and then developed a solitary metastasis in the right 10th rib. She had no recurrence of the initial cervical carcinoma. She had localized pain in the region of the rib lesion which was demonstrated to be osteolytic on radiographic examination. With complete resection of the involved rib and postoperative radiotherapy to the rib bed, she has done well. She is disease free two and a half years after metastasis and 11 years after the initial diagnosis of cervical carcinoma.

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Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Toxic Shock Syndrome

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Toxic Shock Syndrome occurs in a variety of clinical settings in association with an antecedent staphylococcal infection. It is toxin mediated and often associated with multiple organ failure. An increasing number of cases are non-menstrual related. Practitioners caring for patients of all ages should be aware of the clinical manifestations of this syndrome.

Toxic Shock Syndrome is a potentially life-threatening illness precipitated by the release of the Toxic Shock Syndrome Toxin (TSST) from S. aureus. The hypotension associated with TSS can lead to multisystem failure. As many as 30 per cent of the currently reported cases are non-menstrual related, and have been associated with both surgical and medical illnesses. TSS is a condition that should be familiar to all health care providers.

Case #1

D. M., a two-and-one-half-year-old male, recently had been treated for several episodes of unresolving otitis media. He had been treated sequentially with Amoxacillin, Ceclor, Pediazole, and was most recently changed to Bactrim. He developed a one-day history of fever, diarrhea, lethargy, photophobia, and the sudden onset of a generalized "lobster red" rash. He was referred for possible Stevens-Johnson Syndrome. Physical examination revealed the child to be lethargic and photophobic with a temperature of 39.4°C, pulse of 180, respiratory rate of 50, blood pressure of 70/40 (approximately the fifth percentile for his age). Physical examination revealed hyperemic conjunctivae, pharynx and tongue. He had bilateral bulging, red tympanic membranes. There was mild cervical lymphadenopathy. The spleen tip was palpable, and the liver edge was two cm below the right costal margin. There was a diffuse red macular rash over the entire trunk and face, in addition to the palms and soles. No petechiae were seen.

Laboratory evaluation revealed hemoglobin of 10.4 gm/dl. WBC was 10,300 with 28 per cent bands, 58 per cent PMNs, five per cent eos, and eight per cent lymphs. Urinalysis on cathed specimen revealed a specific gravity of 1.025 with two to five WBCs per high-power field. Chemistry panel was normal, except for bicarbonate of 15. Calcium was 7.4 with an albumin of 3.4. Liver

function tests revealed an AST of 128 and an ALT of 76. CPK was 100 per cent MM fraction with a total of 208. Spinal fluid was normal and cultures for blood, urine, and CSF were sterile. Tympanocentesis was performed of the right ear and cultures grew S. aureus.

The child was started on vigorous fluid resuscitation and IV oxacillin. His course was complicated by oxacillin hepatitis on day six when the AST and ALT peaked at greater than 900 each. He was switched to IV nafcillin and within 48 hours the AST and ALT returned to normal. Following discharge, the patient was seen in clinic one week later at which time the skin on his palms and soles was desquamating.

CASE #2

C. M. is a 15-year-old sexually active female. She presented with a two-day history of sore throat, fever, myalgias, and diarrhea. She currently was on day five of her menstrual cycle and was using an unnamed brand of super tampons. She presented with a two-hour history of generalized erythematous rash and severe headaches. Physical examination revealed her to be photophobic and toxic appearing. Temperature was 40.6°, respiratory rate was 40, pulse was 124, and blood pressure was 90/70 supine. The most significant findings were a red, macular rash over the breasts, abdomen and thighs. Her conjunctivae were hyperemic, as was the entire oral cavity. The remainder of the examination was within normal limits except for the pelvic examination which revealed a tampon in the vagina and yellow/bloody pericervical discharge.

Laboratory analysis for this patient revealed a hemoglobin of 10.2 gm/dl. WBC count was 10,500 with ten per cent bands, 79 per cent PMNs, eight per cent lymphs, and a platelet count of 121,000. Cathed urine revealed specific gravity of 1.032 with 10 to 20 WBCs per high-power field. Arterial blood gas revealed a pH of 7.39, pCO_2 of 20, and a pO_2 of 56 on room air. Chemistry panel was normal except for creatinine 1.5. Serum calcium was 7.7 with an albumin of 2.1. Liver function tests were normal except for total bilirubin of 2.0. CPK was 100 per cent MM fraction with a total of 277. CSF was normal, and both blood and spinal fluid cultures were sterile. Urine culture grew greater than 100,000 colonies of E. coli. Vaginal cultures were obtained and revealed a heavy growth of S. aureus. The patient was started on vigorous fluid resuscitation and IV oxacillin. Follow-up vaginal cultures failed to grow S. aureus. The patient was seen in clinic two weeks after discharge and had severe desquamation of skin on her palms and soles.

"Antibiotics of choice include a penicillinase-resistant form of penicillin, usually oxacillin or nafcillin."

Discussion

The two cases presented are very illustrative of a clinical picture of Toxic Shock Syndrome (TSS). The second case is the more stereotypical form of menstrual-related TSS. The first case, however, was that of a young child who had a S. aureus otitis media which led to the development of his TSS. Physicians need to be aware that TSS also occurs in young children and male patients.

Incidence

The national incidence of TSS most recently has been estimated to be approximately 0.8 cases per 100,000 total population per year. The highest age specific incidence is in females age 15 to 19 years with 4.8 cases per 100,000 population. West Virginia approximates the national incidence data (1).

The first cases of TSS were reported by Todd and associates at Denver Children's Hospital in 1978, where seven children between the ages of eight and 17 years were first described as having TSS (2). These children presented with fever, headache, diarrhea, rash, acute renal failure, elevated liver transaminase and confusion. They followed their acute illness by desquamation of skin approximately two weeks later. Schlossberg, in 1979, reported the case of a 20-year-old female with Kawasaki's Syndrome who had vaginal cultures positive for S. aureus (3). This staphylococcal organism was found to release a pyrogenic exotoxin. When this exotoxin was injected into mice and rabbits they developed a clinical syndrome similar to TSS. This was the first real indication that a toxin may be responsible for the clinical picture.

The first large series of cases relating TSS to menses in females was reported in 1980 from Davis and associates at the University of Wisconsin (4). These investigators reported 38 cases in their series, 37 of which were female and 35 of which were menstruating at the time of their illness. Thirty-four of the 35 menstruating females were using tampons. These investigators noted that 10 of the 35 original patients had a recurrence of TSS with their subsequent menses. Nine of those 10 were originally treated with either penicillin or ampicillin. These investigators showed that 27 of the 37 women (74 per cent) had vaginal cultures positive for staph aureus. The same investigators cultured 71 women in the Gynecology Clinic at the University and only seven of them (10 per cent) had vaginal cultures positive for S. aureus. In their University Health Clinic, 466 women had vaginal cultures obtained and only 12 (2.6 per cent) were positive for S. aureus.

"Physicians need to be aware that TSS does occur in young children and male patients."

Staphylococcal Toxin

Investigators working at UCLA and the CDC in 1981 reported isolation of a pyrogenic exotoxin-C from the S. aureus of 28 of 28 patients diagnosed with TSS and in only five of 32 controls (5). When this exotoxin-C was injected into laboratory rabbits, they became hypotensive and died. This was a further indication that the TSS

TABLE
Case Definition of TSS

Fever:	temperature ≥ 38.9°C
Skin:	a) diffuse macular erythroderm
	b) desquamation 1 to 2 weeks after onset of illness involving palms and soles
Hypotension:	a) systolic BP ≤ 90 for adults
	b) systolic BP ≤ 5 percentile for children
	c) orthostatic drop
Multisystem involvement:	(at least three)
GI:	diarrhea or emesis
M/S:	myalgias or CPK > 2X normal
Renal:	a) BUN or Creatinine > 2X normal
	b) sterile pyuria with ≥ 5 WBCs/hpf
Hepatic:	Bilirubin, AST, ALT > 2X normal
Blood:	platelets ≤100,000/mm³
CNS:	disorientation without focal deficits
EENT:	oral, pharyngeal, or conjunctival hyperemia
Negative results for:	(if obtained)
	Blood, throat, CSF cultures

resulted from the toxin produced by the staphylococcus organism. In 1981, separate investigators reported isolation of enterotoxin-F from the S. aureus isolated in 61 of 65 patients diagnosed with TSS and in only three of 26 controls (6). Later, it was discovered that the exotoxin-C and enterotoxin-F were the same protein (7). It was then renamed the Toxic Shock Syndrome Toxin - 1 (TSST - 1).

Diagnosis

The case definition for Toxic Shock Syndrome should include the following components: fever, rash, desquamation, hypotension, multisystem involvement, and negative cultures of the blood, throat, and CSF (8). The fever should be greater than or equal to 38.9°C. The hypotension, which is a major clinical feature of TSS and allows one to differentiate it from other similar conditions like Scarlet fever or Kawasaki's, is a systolic blood pressure of less than or equal to 90. For children, the systolic blood pressure should be less than or equal to the fifth percentile for their age. An orthostatic drop in blood pressure is also acceptable.

The rash is usually defined as a diffuse macular erythroderma often involving the mucous membrane surfaces and the palms and soles. The desquamation seen in TSS normally does not occur in the acute phase of the illness but, rather, two weeks after the onset of the illness. In other staphylococcal-related illnesses like the Scalded Skin Syndrome, desquamation or peeling of the skin normally occurs during the acute phase of the illness.

The multisystem involvement should include three or more of the following organ systems: hyperemia of the oropharynx and/or conjunctivae, vomiting or diarrhea for the GI system, myalgias or CPK of greater than or equal to twice normal, BUN or creatinine greater than or equal to twice normal, or urinalysis with greater than or equal to five WBCs per high-power field. Elevation to twice the upper limit of normal for total bilirubin, AST, or ALT is acceptable for hepatic dysfunction. Hematologic dysfunction is defined as a platelet count of less than 100,000. Disorientation without focal neurologic signs is evidence of CNS involvement. Refer to Table for summary of case definition of TSS (8).

"The hypotension, which is a major clinical feature of TSS and allows one to differentiate it from similar conditions . . . , is a systolic blood pressure of less than or equal to 90."

These signs and symptoms occur with varying frequency in many of the patients seen (9). Diarrhea is the most common symptom reported in nearly all patients. It is followed in frequency by myalgias and headache. The most frequent abnormal laboratory test seen is a leukocytosis with evidence of granulocytic immaturity; this occurs in about 90 per cent of the patients. Hypocalcemia and hypoalbuminemia occur in about 80 per cent of the cases (9-10).

Severe complications seen with TSS and their estimated percentage of occurrence include disseminated intravascular coagulopathy (20 per cent), adult respiratory distress syndrome (20 per cent), and acute renal failure (67 per cent). These may all be secondary to the hypotension (10).

Children less than 10 years of age who develop TSS manifest the same clinical and laboratory spectrum of abnormalities as adults. However, as a group, children may have a higher incidence of respiratory distress syndrome (11).

Tampons

In 1985, the production of the TSST-1 was found to be inversely related to the local concentrations of magnesium (12). It was also discovered that certain tampons bind magnesium more tightly, thereby lowering the levels of magnesium in the vagina and therefore increasing the production of the TSST.

In 1987, the Center for Disease Control reviewed the 582 cases of TSS reported between 1983 and 1984 (13). Four hundred and three (70 per cent) of these cases were menstrual related. Of those, 392 (97 per cent) of these women used tampons, and 285 used a single brand of tampons defining the study group. The control group consisted of nearly 35,000 women who also used a single brand of tampons. These women were surveyed. CDC then calculated the odds ratio of getting TSS among tampon users in general, as well as related to the absorbency of the tampon. They found that the use of tampons did increase the risk for TSS, as did the increasing absorbency of the tampon.

Other Causes

Physicians need to be aware that more and more cases of non-menstrual TSS are being reported. A 1982 abstract revealed the youngest case of TSS to be diagnosed at autopsy in a three-week-old who had a S. aureus skin abscess which developed from a heel puncture in the nursery. This S. aureus did produce a pyrogenic exotoxin (14).

There are numerous surgical procedures associated with TSS. Some of those reported include such common procedures as laparotomy, mastectomy, orchiectomy, and herniorrhaphy (10, 15). Numerous gynecologic procedures have also been reported including tubal ligation, hysterectomy, vaginal delivery, cesarean-section, septic abortion, and dilatation and currettage. Septorhinoplasty has been reported commonly in association with TSS, and may relate to the cotton nasal packing setting up a mechanism similar to that seen in menstrual-related TSS (16).

Numerous medical illnesses have also been reported in association with TSS including skin lesions, bursitis, mastitis, adenitis, lung abscess, tracheitis and postinfluenza pneumonitis (10, 17). The differential diagnosis for TSS includes numerous illnesses. Rocky Mountain Spotted Fever, Leptospirosis, Rubeola, Kawasaki's Syndrome, Scarlet Fever, and the Scalded Skin Syndrome should all be considered.

Therapy

Treatment of TSS should always include aggressive fluid resuscitation. In those menstrual-related cases of TSS, the tampon should be removed as should the nasal packing in a septorhinoplasty. Antibiotics of choice include a penicillinase-resistant form of penicillin, usually oxicillin or nafcillin. An alternative to these in penicillin-allergic patients would be vancomycin.

The use of steroids in the acute management of TSS is much more controversial. In 1984, a retrospective analysis of 45 patients was published (18). Twenty-five patients were treated with steroids and 21 were not. There was no difference in the mortality or morbidity seen in these two groups; however, the non-steroid-treated group had a shorter duration of fever. A problem with this study is that it was not standardized for the type of steroid, dosage of steroid or route of administration. The final answer on the use of steroids in the management of TSS is not in yet.

It is important that the variety of clinical settings leading to TSS be recognized by all health care providers. This illness does not discriminate or seek out only young, menstruating females. A staphylococcol infection at any site can precipitate this illness.

"This illness does not discriminate or seek out only young, menstruating females. A staphylococcal infection at any site can precipitate this illness."

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Is there a Harley Street in your future?

By Philip Alper, M.D.

The rapid growth in managed care could bring 'elite-street' medicine to America

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What's the newest medical game in town? It has to be the emergence of an American equivalent to London's famous Harley Street physicians—the latter being sought-after fee-for-service practitioners in a world of socialized medicine.

Spurred here by the rapid growth of managed care, a Harley Street will exist before long in every major American city. Only its exact location and the identity of the physicians who will populate its offices remain to be determined. As you read on, I suggest you check to see how much sense what I describe makes to (and for) you.

British v. American 'Elite'

First, let me say that I don't really *like* the idea of an elite guard in medicine. It certainly isn't democratic. Nor is it sure that this system allows selection of the very best medicine has to offer. Too often "society" doctors are the brashest rather than the best.

However, today's Harley Street has a far greater importance than mere snob appeal. In England, it functions as the most visible alternative to socialized medicine. It provides some patients with services and amenities not otherwise available. It also serves those who aren't treated by reminding the British government not to be too complacent in accepting the deficiencies of mass-medicine.

In America, we have something different. It has recently been dubbed "commercial socialized medicine." This is an apt description for price-competitive health care on a large scale in which initiative has largely passed from physicians to business organizations. The latter have increasing power to "socialize" physician behavior, controlling both what we do and what we earn.

Consider some local experiences and what they portend. The San Francisco Bay area is still in the honeymoon period of commercial socialization. For the most part, push has not yet come to shove. Patients in affluent San Mateo County may drive Mercedes and Jaguars, but quite a few have joined the regional discount IPA-HMO. Why not? Everybody loves a bargain—even the rich.

Physicians like the plan's advertising, which brings them patients without putting themselves out. They also retain more than 50 per cent of the premium dollar for themselves, and they and the hospitals own the plan. Not bad.

If this sounds too good to be true, it is. The plan is losing money. The percentage of fees withheld has just been doubled and may go higher. There is talk of placing primary doctors on capitation, of doing "real" gatekeeping, and of other economy measures. Soon patients will begin feeling the pinch, too, and then the honeymoon will be over.

The HMO game is bound to get dirtier. In Minneapolis, the members of the physician-sponsored IPA-HMO have found their own management promoting a plan that solicits their already discounted patients into an even more discounted plan. Worse still, the lowest cost plan uses a few preferred hospitals in which the majority of the IPA members are not on staff.

Such dirty pool is inevitable as plan managers fight it out with competitors at the low end of the price scale. Indeed, one entrepreneur I've met sneers at *all* the doctor-sponsored plans. "They'll fall of their own weight," he says, "and I expect to pick up the pieces."

His prescription: Get rid of all the internists and primary care GYNs. Use young family practitioners to do all the primary care at $20 to $30 an hour. Keep a handfull of GI, cardiology, and pure OBG

subspecialists for essential referrals. Hire all other consultants at rock-bottom rates.

The plan is working. New, young doctors are appearing all the time, and new offices are being opened. But if this also sounds too good to be true, it apparently also is.

Consultation is discouraged. "Calling a consultant earns you a demerit," says one young physician. That doctor complains of feeling insecure when handling very sick infants. There have been rumors among consultants of torn tendons, fractures, and cancers that have gone undiagnosed; of risky practices like sending elderly people home in the presence of significant internal bleeding; and of a pattern of care that traditionally would have been considered below the community standard.

Nobody knows exactly how much managed care doctors will be delivering in the next five or 10 years. But whatever the percentage, there will definitely be a place for care that is better, more personal, or simply different. In the past, this has been called "custom-care," and the term still seems to fit. That is what our American Harley Street physicians are going to give. Even at this early stage, it's possible to make some other observations about them, their patients, and what they will do.

Who will Practice on Harley St.?

In my travels, I've met a number of physicians who are natural Harley Streeters. Some are simply at the top of their field. Others may not be technical wizards, but instead have a solid track record as patient pleasers. The ability to attract and satisfy patients is the only ingredient that is essential to a Harley Street practice.

Currently, most of my Harley-eligibles are in solo or small group practice. They're patient-oriented, yet individualistic and possessed of a streak of independence. Some have signed with managed-care plans, but if so, they've accepted only a small number of patients from any single plan. Threats like being told the three-letter plans will "slam dunk" them (health economist Walter McClure) or bluster accusing them of being like passengers on the Titanic who asked for deck-chairs instead of lifeboats (an entrepreneur) may concern them but don't intimidate them. They tend to be quiet and do their own thing discreetly. As one puts it, "There's no need to upset colleagues."

Certain kinds of practices lend themselves to continued independence. Those whose work is not normally covered by insurance—like cosmetic surgery—have always functioned semi-autonomously. They should continue to do so. So will a number of fringe endeavors like weight reduction, exercise therapy, and a variety of holistic pursuits.

I also expect to see a blending of mainline medicine with innovative modifications that gives the combined product enhanced market appeal. For example, a neurologist in my area has learned to do osteopathic-style back and joint manipulations. He and his partner are booked up long in advance with heavy demand for their services coming from employers and insurers, as well as patients. Their move to Harley Street should be relatively painless.

"One entrepreneur I've met sneers at all the doctor-sponsored plans. 'They'll fall of their own weight,' he says, 'and I expect to pick up the pieces.'"

Some primary care physicians will also make it to Harley Street, but their road will be tougher. That's because it's hard to be (or appear) unique when giving primary care. Also, most people tend to look on primary care as an insured expense.

Who will be Harley St. Patients?

Still, there will be many patients willing to pay over and above insurance for what they consider to be more personal attention and more trustworthy opinions than can be expected under managed care. The traditional rule has been that with up to 15 per cent difference in insurance premiums, people will fight to the death to keep their usual physician, but at 15 per cent they can't get rid of him fast enough. However valid this rule is at present, it will change as controlled methods become more and more the mainstream.

Some people will straddle the fence. Minor complaints will be handled under three-letter contracts. More serious problems will require Harley Street consultation, even if there is no insurance coverage.

Patients will come from all walks of life. Not all will be wealthy. How much money patients have is probably less important than how they want to spend the money they do have. Some doctors are already seeing a partial return of those who've had experience with alternative care plans. Price becomes less of an issue then.

That doesn't mean that Harley Street fees will always be astronomical, however. There will be price competition on Harley Street as well as elsewhere. Furthermore, with the ability to depart from rigid insurance-fee schedules and to charge more to those who can afford it, others can be charged less when they don't have the means. Such discounts will be appreciated because they'll be given by the doctor rather than commanded by the government or the insurer. And conversely, high fees won't generate outrage as long as care is available through usual channels for less.

One colleague who is headed toward Harley Street tells me how HMOs (which he didn't join) have cleaned up his practice.

"A process of self-selection has operated without my knowing it," he says. "Now, when I look at my schedule, there isn't a person I don't want to see on the list. The ones who weren't sure about me or who had other gripes are gone."

Patients who leave for HMOs sometimes ask whether they can return if they're unhappy. "Of course," he answers, "provided I have the space available at the time." In other words, no special *in* for those wanting a special *out*. This highly competent doctor says his

mood has improved, he's more attentive to patients, less tired and harrassed, and able to provide better care than ever.

No Haven From Competition

Practicing on Harley Street will be exciting because of the element of risk. Although not quite a high-wire act, it should still stimulate the creative juices. Innovation may occur either in clinical areas or in coming up with new wrinkles in health-care delivery.

I have in mind a physician who currently functions like a one-man HMO. This doctor finds it absurd that his patients pay full fees to hospitals and consultants who otherwise try to outdo one another in their eagerness to sign up discount customers. So he brokers their care privately.

Will the far-sighted hospital administrator be willing to give his fee-for-service patients discounts equivalent to the ones provided to HMO members? The answer, he tells me, is usually "yes," for three good reasons. First, he's on the staff of half a dozen hospitals, any one of which is happy to have more patients. Secondly, on reflection, the administrator realizes he would gain nothing more if these people, too, were forced into HMOs. And finally, with one typical hospital seeing 50 per cent of revenue regulated by DRGs, 30 per cent more controlled by contract, and only 20 per cent left to the free market, it just isn't reasonable to expect one-fifth of the patients to make up losses incurred by everyone else.

Consulants are approached in the same way. Will they be willing to take, for example, the Medicare allowance plus supplemental insurance as payment in full? Again, he says, the answer is generally "yes." And why not? Just because his patients pay more for health insurance isn't a good reason why they should pay higher out-of-pocket costs, too.

Apparently, patients have been so pleased by this physician's case-management effort that they've suggested he charge for his time.

"Some Harley Streeters will end up testifying in court when patients file suits for alleged negligence due to faulty managed-care decision making."

He's checking into it and so far feels that the idea has merit as long as it doesn't cover services subject to the Medicare fee freeze and isn't related to billings (or non-billings) by colleagues or hospital. Can there be any doubt that such energy and ingenuity is destined for Harley Street?

Medicine's Reaction

America's Harley Street physicians aren't likely to be popular with most of their colleagues who practice on other streets. This will be due partly to professional jealously and partly to resentment of their choice of a different pathway through medicine.

There's probably going to be another reason for unpopularity, however. Some Harley Streeters will end up testifying in court when patients file suits for alleged negligence due to faulty managed-care decision making.

Physicians caring for HMO patients aren't going to enjoy sharing in the extra legal liability costs generated by HMO cost-containment policies. The medico-legal situation promises to be messy, but perhaps socially useful as a brake on allowing reductions in services to get totally out of hand as we sink deeper into the commercial socialization of medicine.

Harley Street will also have support from the government, which will find it useful to have a place where people who are dissatisfied with government or business dominated care can go.

Will there be a Harley Street in America? It's almost certain. When? It's only a matter of time; increasing government and third-party intervention quicken its arrival. Who will practice there? That's still the big question.

Doctor Alper, a Burlingame internist, is a member of the **CALIFORNIAN PHYSICIAN** *Editorial Board.*

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And Miles to Go . . .

It's hard to believe this is my final message to you as author of "The President's Page." The year has gone rapidly in far too many respects. The travel around the state to meet many of you as well as the national meetings with our colleagues from across this great land have been most enjoyable and educational. Your Association continues to move forward, but there is much to be done.

Professional liability continues to be a problem in terms of the affordability of the insurance even though it appears now that there will be no or very little rate increase ahead for 1989. We must continue to work for rationality in the tort system.

We must continue the work of our Committee on Physicians' Health and Well-Being to aid our colleagues who may be impaired through substance abuse. We need to find ways to deal with these problems while protecting the rights of confidentiality for patients which these impaired physicians are. If they willingly subject themselves to treatment programs, their names should not be front-page news any more than we physicians would reveal the names of our cancer patients or AIDS patients. If the physician refuses treatment or fails to seek help before he/she is caught in a hospital or Board of Medicine action, then public knowledge of a transgression is a different matter.

While both of the foregoing problems need continual study and action, I would like to suggest that there is a larger and even more important issue which we, as physicians, need to address and be concerned about. I refer to the issue of quality assurance.

Every physician is only too keenly aware of the existence of PROs, the Quality Assurance Act of 1986, and the myriad hospital and specialty committees which exist to watch over virtually every action and decision the physician makes. Businesses and government in their eagerness to contain costs have installed all sorts of bureaucratic watch dogs and implemented a wide assortment of rules and regulations regarding length of stay, readmission, laboratory and x-ray studies, drug formularies, in-patient vs. out-patient procedures, utilization review mechanisms, and second opinions.

It seems that literally everyone is in the act today attempting to audit physicians. Quality assurance is a physician issue, a physician responsibility, and should be a physician authority. Doctors need to be involved in the issue of determining what quality care is and how to deliver it; otherwise, outside forces will continue to make our lives frustrating and less and less rewarding. We well recognize that "cookbook medicine" is not necessarily good medicine, that medicine is still as much an art as a science, and that there can never be a substitute for professional judgement in a difficult case. Yet, if we abrogate our responsibility to identify and measure true quality care and to teach it to our professionals, we will continue to be at the mercy of those outside the profession who will attempt to do just that.

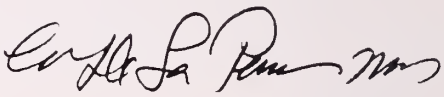
Since the vast majority of us are members of one or more hospital staffs, and since much of what is being done to both measure and implement quality care is taking place on the hospital staff level, it behooves us to develop a strong medical staff section of our own House of Delegates as together we attempt to develop the means of working in our staff roles and playing dominate roles in all quality assurance physician activities.

Medicine is our profession. We have, unfortunately, allowed ourselves to become the victims of the changing times in medicine more by default than by design. Whether because of concern for the success of our busy practices or because of our humanitarian and scientific bent keeping our noses so to the grindstone that we've failed to see what's happening around us, the fact remains that we have relinquished a great deal of the control over our lives which we formerly enjoyed. And that has not been to the benefit of either ourselves or the patients we serve.

It is time to wrest back some of the control over our own destinies if it is not already too late. If apathy has been a descriptive adjective of physicians over the past few years, then let accountability and action be the hallmarks of the coming years. Be involved! Support our organizations and our elected leaders. Take part in the discussion of our issues. Don't be off on tangents tilting at windmills. Be part of the action and direction determined democratically by our state and national organizations through our resolutions and policies developed by our House of Delegates on both the state and AMA levels.

To paraphrase one of our recent and well-known Presidents, "Ask not what your profession can do for you, but what can you do for your profession?" The answer: be involved.

It has been a good year and I thank each of you members who have contributed in so many ways to make it a year I will always remember. I wish our incoming President, Bill Atkinson, well and pledge my support to him and to all of our leaders. We continue to accomplish, but to paraphrase Robert Frost, "There are miles to go before we sleep."



Cordell A. De La Pena, M.D.,
President
West Virginia State Medical Association

We Salute President De La Pena

Some Leaders lead with fanfare and flair, turmoil and stress; others go about their work quietly, efficiently and effecuively.

So it has been with the term of Cordell A. De La Pena, M.D.

His tenure in office has been dignified and effective. He has traveled widely throughout West Virginia bringing the message of unity for the profession at a time when some sow discord. He has sought diligently, as the first foreign medical graduate (FMG) president, to emphasize the role of the FMG in "mainstream" medicine rather than urging separatism.

Doctor De La Pena's thinking has been, "we are, all of us, first and foremost physicians regardless of our national origin or ethnic backgrounds. We have an obligation to our profession to make it better, maintain its ethics and see to the needs of our patients who must always be the center of our reason for being."

That message is a universal one which ought to be well heeded by all who call themselves "physician."

Cordell A. De La Pena, M.D.

It is truth which has no barrier, no intellectual differential and nothing to do with where the doctor received his training.

This has been the simple message of Doctor De La Pena. He has been quietly energetic and effective. He has worked to establish a hospital medical staff section (HMSS) for WVSMA to work with the well-established HMSS on the AMA level. Most states already have such a body to work specifically on the issues of concern to all physicians who hold privileges as a hospital staff member and find themselves often stymied by the rules, regulations and care-impacting decisions of hospital boards or administrators.

If the WVSMA sees fit to approve the task force and Executive Committee recommendaton that our bylaws be amended to create a HMSS for this organization, it will be lasting testimony to the leadership of Doctor De La Pena, who has been attending the HMSS meetings on the national level and working tirelessly to implement such an entity on the state level.

Cordell De La Pena has been a good leader, a kind and considerate man who has worked well with fellow members of the Executive Committee and the headquarters staff. His presence will continue to be felt as he heads into his year as Council Chairman. He has been a credit to the good office of President of the West Virginia State Medical Association.

Thank you, Mr. President. Best wishes for your Council leadership and for you personally in the coming years.—MGS

William H. Lively R.I.P.

The announcement of Bill Lively's death appeared as a news item in our July issue. It was nicely done with a column width picture and the lead . . . Former Executive Secretary Dies.

The starkness of the statement, for those who knew him, was surely softened by a myriad of indelible pleasant memories and recollections of hilarious anecdotes of this talented and witty, yet, quiet and humble man who genuinely liked doctors and served their interests extremely well.

It is no secret that Bill had a drinking problem. It is to his credit that he stalemated that problem after leaving the Association.

The job of Executive Director of any type of association is not an easy one. Each year brings a new zealot up from the ranks, eager to leave his mark in the annals of the association. Some bring an agenda not unreasonable. All demand the loyalty and the attention of the Executive Director and association staff. The job of Executive Director is not half bad for one blessed with a touch of cynicism and the reassuring hope that next year might bring someone less difficult to deal with.

(Continued on Next Page)

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Bill was not so blessed. He liked doctors. Liked their ideas. Liked to promote their plans. He formed attachments of loyalty to each of those baton carriers and yearly was torn asunder at the need to break and then make new attachments, new loyalties. Alcohol somehow made tolerable that otherwise intolerable annual occurrence. That's why he drank and that's why he had to leave this Association. He could no more be neutral and uninvolved than he could hide his West Virginia drawl. His very survival depended on his leaving.

The city of Charleston reaped benefit from his personal tragedy and the medical association's loss. He served the city faithfully and well after leaving us until his untimely death on May 11, 1988.

For those of us involved in Association activities during his tenure, Bill Lively was a confidante, an advisor, a navigator, a first sergeant, and, above all else, a friend. He liked doctors. That was the basis of his professional strength and of his personal weakness.

Bill was trained in Journalism and for many years the Managing Editor of the *Journal*. It seemed fitting that his passing should be noted in a journalistic genre. Thus, the news item in July. This month we, belatedly, must let his family, friends, acquaintances and plain admirers know what Bill surely knew . . . doctors liked Bill Lively every bit as much as he liked them. We admired him probably even more than he could appreciate. We deeply regret his passing.—SDW

Growing Discord Between the Primary Care Provider and Subspecialist

As a fourth-year medical student with an eye toward graduation and residency training, I am not prepared to offer insight into the ways in which medicine will evolve in the 1990s. Yet, I find that my colleagues and I are nervously looking beyond residency match day into a future replete with the promise of new frontiers, new ethics, and new boundaries. Perhaps it is this perceived wealth of alternatives which makes us uneasy. Medical students and physicians alike are notorious for enjoying scheduled, well-organized lives.

Or, perhaps it is a less subtle, more practical phenomenon we are experiencing—we are apprehensive because our role models are revealing apprehensiveness: There are palpable undercurrents of tension in our profession today. This tension not only has arisen from the more obvious external factors impinging on the practice of medicine, such as restrictive legislation and the malpractice fray among other things, but it has also, more disturbingly, arisen from perturbations within the rank and file.

I cite as an example Dr. Daniel J. McCarty's article, "Why Are Today's Medical Students Choosing High-Technology Specialties Over Internal Medicine?" in the August, 1987, issue of the New England Journal of Medicine (1) in which Doctor McCarty takes a so-called "heavy-handed swipe" at his fellow physicians in "the technical and procedural disciplines." In the article, Doctor McCarty suggests that, in recent years, young physicians have been seduced in increasing numbers away from the "cognitive" specialties such as internal medicine, pediatrics, and family practice into the high-tech, "action" specialties such as orthopedics, ophthalmology, anesthesiology, radiology and the surgical subspecialties. Not unexpectedly, Doctor McCarty drew criticism from the subspecialists, and elicited, I suspect, applause from the mass of internists and other primary care specialists who share his frustrations.

It is difficult to argue with Doctor McCarty's basic premise—that the primary care disciplines should receive adequate and equitable reimbursement for the services that they provide. Such reimbursement would undoubtedly help to fortify the legion of primary care physicians who will be practicing in this day and age of AIDS management and increasing geriatric demands.

However, my intent in citing Doctor McCarty's article is not to choose a side, but rather simply to observe that lines have been drawn and the factions are becoming overtly discordant. The issue we must now confront is how to solve this healthy discord between the primary care physician and the subspecialist before it degenerates into an insidious divisiveness which could perhaps undermine the integrity of our profession, and threaten the quality of health care we have enjoyed in the United States over the past three decades. The primary care provider and the subspecialist must put self-interest aside in order both to serve the interest of the profession as a whole, and to achieve a peaceful coexistence.—WNW

1. McCarty DJ. Why are today's medical students choosing high-technology specialties over internal medicine? N Engl J Med 1987; 317:567-69.

WVSMA Convention August 16-21

Physician-State Senator to be Keynoter

A Michigan physician-state senator from Battle Creek will deliver the opening Thomas L. Harris Address Thursday morning, August 18, for the 121st Annual Meeting at the Greenbrier.

John J. H. Schwarz, M.D., Senator from Michigan's 20th District, is in the private practice of otolaryngology in Battle Creek.

The title of his address will be "The Physician in Politics: An Imperative for the 1990s."

Some 475 physicians, Auxilians, exhibitors and others are expected to attend the Convention, scheduled August 16-21.

Bill M. Atkinson, M.D., Parkersburg surgeon, will be installed as WVSMA President to succeed Cordell A. De La Pena, M.D., of Clarksburg during the second session of the House of Delegates Saturday afternoon, August 20.

Former Mayor

Doctor Schwarz, Mayor of Battle Creek in 1985-87, is Chairman of the Michigan Senate Committee on Education and Mental Health, and Vice Chairman of the Senate Committe on Commerce and Technology. He also is a member of the Senate Committee on Health Policy. He was elected to the Senate in 1987.

Doctor Schwarz was a Battle Creek City Commissioner from 1979 until 1987, and was a member of the Republican State Committee in 1975-76.

He was graduated from the University of Michigan, and received his M.D. degree in 1964 from Wayne State University.

Doctor Schwarz interned at the University of Southern California Los Angeles County Medical Center, then served with the U.S. Navy in 1966-67. He completed a residency

Atkinson

Schwarz

in general surgery at Oakwood Hospital in Dearborn, Michigan, in 1967-68, served with the Central Intelligence Agency in Southeast Asia for two years, and then was a resident in otolaryngology at the Massachusetts Eye and Ear Infirmary, Harvard Medical School, in 1970-73.

He is a Diplomate of the American Board of Otolaryngology-Head and Neck Surgery, and a Fellow of the American College of Surgeons.

Convention Schedule

The first general session will begin immediately following Doctor Schwarz's address, with other general sessions scheduled Friday morning and Saturday morning. As announced previously, discussion subjects will include AIDS; mandatory assignment; medical liability; ethics; liability insurance in West Virginia and controversial surgical procedures; cardiovascular surgery at West Virginia University; heart disease, and endoscopic therapy of biliary and pancreatic disease. (See Convention Program in this issue of the *Journal*.)

Convention activities will begin with a meeting of the Executive Committee Tuesday evening, August 16. Council will meet Wednesday morning, and the first House Session will be held that afternoon.

Doctor De Le Pena will deliver his Presidential Address at the first House session.

A seminar on pension and profit sharing plans will be sponsored following the first House session Wednesday by Parker/Hunter Incorporated of Clarksburg (see Program), which also will host the President's Reception immediately following.

Thursday afternoon will be set aside for golf, tennis and volley ball tournaments, and meetings of WVSMA sections and specialty societies will be held Friday afternoon.

A luncheon is scheduled Saturday for past presidents of WVSMA, visiting neighboring presidents, and West Virginia 50-year-graduate physicians.

AMA President to Speak

As announced earlier, AMA President James E. Davis, M.D., of Durham, North Carolina, will address the second and final House session.

There will be a reception for exhibitors Thursday evening, sponsored by CNA Insurance Company and McDonough Caperton Insurance Group; and on Friday evening there will be cocktail parties for WVU, Medical College of Virginia, and University of Virginia alumni.

No specific Association-sponsored entertainment event has been planned for Friday evening.

The 121st Convention will end Saturday evening with McDonough Caperton Insurance Group sponsoring a reception for outgoing and incoming Association and Auxiliary officers.

Conventioneers are urged to visit some 42 commercial exhibits and six scientific/education exhibits in the Eisenhower Room, which also will be the location of the convention registration desk, beginning

Thursday morning. (Convention registration will be held in the Greenbrier Registration Lobby on Wednesday afternoon.)

As noted, please see the official Program and related articles in this issue of the *Journal* for specific convention activities and speakers.

The annual meeting of the Auxiliary, with Denny Fischer (Mrs. Herman) of Clarksburg, the current President in charge, as usual will hold its meeting in conjunction with the Association's. The official Auxiliary program also appears in this issue of the *Journal*.

Ophthalmology Conference

The WVU Department of Ophthalmology will hold its ninth annual conference Friday and Saturday, October 14-15, at Sheraton Lakeview Resort and Conference Center in Morgantown. The conference will feature Paul R. Lichter, M.D., Professor and Chairman of the Department of Ophthalmology at University of Michigan and Director of the W. K. Kellogg Eye Center, as the Hutchinson Lecturer. CME credit is provided.

Friday, October 14, will feature a glaucoma symposium consisting of morning lectures on selected topics in glaucoma and an afternoon automated perimetry workshop. Scientific sessions will be held on Saturday, with Doctor Lichter giving the Third Annual Hutchinson Lecture. For additional information, contact: Department of Ophthalmology, WVU School of Medicine, Morgantown, WV 26506, (304) 293-3757.

Convention Timetable

The Thursday, August 18, general scientific session will follow 8:45 A.M. opening exercises.

The first session of the House of Delegates will be Wednesday, August 17, beginning at 2:45 P.M. The second session will be Saturday beginning at 2:30 P.M.

Part 2: Diagnostic, Therapeutic Problems

Electronic Information For Physicians: AMA/NET

WILLIAM A. YASNOFF, M.D., Ph.D.
American Medical Association

Last time, the capabilities of AMA/NET to assist with diagnostic problems were discussed.

Another important area where electronic information can be extremely useful is in search and retrieval of recent literature. AMA/NET provides several methods of accessing the medical literature. The first of these is EMPIRES (Excerpta Medica Physicians Information Retrieval and Education Service), which indexes articles from 328 key clinical journals. Searching can be done in one of two ways: easy search and advanced search. In easy search, two keywords are entered and a search is performed for all references which pertain to both those keywords. An option is provided for restricting the search to the last six months. Very little (if any) knowledge with respect to searching techniques in databases is required to use easy search.

In advanced search, as many keywords as desired may be entered and combined in whatever way desired. Repeated searches can be done to narrow down the selections as needed. While advanced search is not difficult to use, it does require some knowledge of both searching techniques and the commands available.

AMA/NET provides access to MEDLINE, the National Library of Medicine database of the world's biomedical literature, in two separate ways. First, access is provided by PaperChase, a friendly user interface developed at the Beth Israel Hospital in Boston. This program allows the physician with very little searching experience or knowledge of computers to construct a successful search of some complexity. Many physicians have found that it provides a fast and easy way to access the medical literature.

The National Library of Medicine's own user interface for MEDLINE, Grateful Med, is also available on AMA/NET. It provides a slightly different environment for helping the physician to develop and execute an appropriate search.

All three of these methodologies provide a useful way to access the most recent medical literature. Although the full text of articles found is not on-line for immediate reading, abstracts are available for the majority of the articles. Also, it is possible to order paper copies of any articles retrieved (up to five EMPIRES articles per month are available at no charge).

The Therapeutic Problem

The physician's approach to a therapeutic problem is very similar to the diagnostic, although there are some sources of information which are more directly helpful. As with diagnostic problems, the traditional options available are colleagues, books, and literature. If information is desired on a specific drug or a class of drugs, this can be obtained from a number of references which are often readily available. However, the often-asked question regarding the determination of the currently accepted therapy for a given disease is sometimes more difficult. Here again, electronic access to the most recent literature can be very helpful.

One of the key words allowed in literature searching is "review." This results in the ability to access a recent review article on any given condition. This can often result in rapid identification of currently acceptable therapy.

Another common therapeutic problem is assessing the possibility of drug interactions, especially for a patient on many different medications. The MEDICOM drug interaction database recently became available on AMA/NET. It allows entry and storage of specific patient drug profiles so that patients with difficult drug interaction problems can be easily reevaluated when therapy is changed. In addition to drug interactions, drug-food, drug-

nutrient, and drug-disease, and potential allergic reactions are also reported. Each reaction has an associated level of severity. If desired, output can be limited to the most clinically significant reactions. This avoids one of the classic problems in consulting printed drug interaction references; namely, the hundreds of interactions listed which have no practical clinical significance.

NEXT MONTH: Current Awareness, Electronic Communication with Colleagues, and more.

Golf, Volley Ball, Tennis Planned

State doctors, Auxilians and exhibitors plan to work sports competition into the business and scientific program schedule for WVSMA's Annual Meeting at the Greenbrier August 16-21.

WVSMA has set aside Thursday afternoon, August 18, for golf, tennis and—for the first time—volley ball tournaments.

Derrick L. Latos, M.D., of Wheeling, volley ball Chairman, is requesting player sign-ups at the Convention registration desk. No prizes will be awarded in this event.

L. Dale Simmons, M.D., of Clarksburg, golf tournament Chairman, said, "Twelve tee-off times have been reserved starting at 12:02 P.M. and the last at 1:30 on the Greenbrier golf course. You may select your own foursome or the Pro Shop will arrange for you to play with a member in the tournament, which is a requirement for prize eligibility.

"When calling for a tee time, identify yourself as a participant in the WVSMA golf tournament so you will be assigned one of the reserved starting times on the Greenbrier course. If you are not in meetings Thursday morning you may arrange your own starting time earlier, but you must play on the Greenbrier course with another member signed up for the tournament."

Prospero B. Gogo, M.D., of Beckley is Chairman of the tennis tournament, which will consist of men's doubles round robin play.

Tennis and golf tournament prizes will be awarded during the reception Saturday evening.

Poetry Corner

Kiss Kiss Kiss

A kiss aptly is a soulful communion,
Anatomically a mucosal coaptation,
Lips to lips like eyes to eyes,
Two hearts silently saying ayes.

A kiss is a prelude to serious business,
It's an unwritten note of true promise,
Lips are sealed and feelings are shared,
Ecstasy prevails as all secrets are bared.

A kiss can be the beginning,
Of many a splendored happening,
A couple's life long commitment,
Each has the other's compliment.

A kiss is an indelible signature of love,
A desire almost pure as a white dove,
Therefore a sweet kiss kiss kiss,
Wherefore sign of a miss miss miss.

Romeo Y. Lim, M.D.
Charleston

By Laughter Lifted

A baby laughed
And somewhere across
My garden
The sound was born
And carried rippling to me
So light so free of worry
So filled with joy
That I
Filled with the ordinary
Suffused with the common
Uninspired
Lifted my head
And thanked God for
That beautiful moving sound

J. Paul Aliff, M.D.
Teays (Putnam County)

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston, 25364.

Nominations Committee

The WVSMA Committee on Nominations will meet at 5 P.M. Friday, August 19, in the Tyler Room at the Greenbrier in White Sulphur Springs.

Members of the 1988 Committee are Drs. Carl J. Roncaglione, South Charleston, Chairman; Paul E. Frye, Fairmont; Larry C. Rogers, Petersburg; James L. Bryant, Clarksburg; Porfirio R. Pascasio, Weston; Jean P. Cavender, Charleston; Rodney L. Stephens, Logan, and Stephen L. Sebert, Lewisburg.

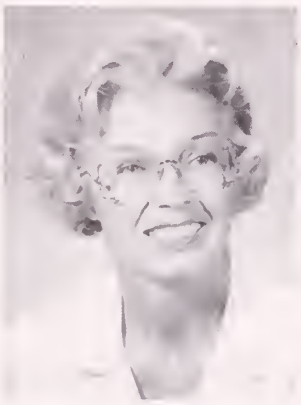
Correction

For the article, "Surgically Curable Hypertension Associated With Juxtaglomerular Cell Tumor," in the June issue of the *Journal,* Page 233, the primary author, J. P. Tierney, should have been designated D.O. instead of M.D. The third author should have been shown as M.R. (not W.D.) Cuadra, M.D.

In the July issue, the location of the author, Marneerat P. Vongxaiburana, M.D., should have been listed as the Veterans Administration Medical Center at Martinsburg rather than at Beckley, for the article, "Neuroleptic Malignant Syndrome and Hyperosmolar Coma: Case Report," Page 288.

The *Journal* regrets these errors.

Auxiliary Program Announced



Mrs. Denny Fischer

Mrs. Mary Strauss

Mrs. Joan Milburn

Mrs. Mary Strauss (Albert J., Jr.) of Hagerstown, Maryland, and Mrs. Joan Milburn (Graham B.) of San Antonio, Texas, will be among honored guests when the West Virginia State Medical Association Auxiliary holds its 64th Annual Meeting August 17-21.

The meeting again will be held concurrently with the WVSMA Annual Meeting at the Greenbrier in White Sulphur Springs.

Mrs. Strauss was installed in June as the new President of the American Medical Association Auxiliary. She will deliver the keynote address during the opening Auxiliary session beginning at 9:45 A.M. Thursday, August 18.

Mrs. Milburn, President of the Southern Medical Association, will speak during the Friday morning session.

County, State President

Before assuming the AMA Auxiliary presidency, Mrs. Strauss served on the national level as regional Vice President, Secretary, Director, and as a member of various committees. In her county and state auxiliaries, she has served in a variety of positions as well as President of both.

Mrs. Strauss received a bachelor's degree in English from Duke University and a master's degree in education from the University of Virginia. She taught Latin and English in secondary schools and served on the dean's staff of Duke University. Her interest in educational activities has continued as she has served on various committees for the Board of Education. With her husband she was a founder and first President of PACE, a county advocacy group for gifted children. She is currently on the Board of Directors of the Washington County Free Library.

In addition to auxiliary activities, Mrs. Strauss has coordinated extensive programs at a local nursing home and hospital for the chronically ill.

Mrs. Strauss and her husband, a pediatrician, have three children.

Medical Technologist

Mrs. Milburn is a graduate of the University of California-Berkeley (School of Public Health) and is a Registered Medical Technologist.

She has the unusual distinction of being the widow of two physician husbands who were members of Southern Medical Association. From her marriage to Dr. Oliver H. Timmins, Jr., an industrial surgeon, she has three children, and from her marriage to Doctor Milburn, an ophthalmologist, one child.

Service in SMAA for Mrs. Milburn began in 1973 when she served on the SMA Convention Committee in San Antonio. She has since served as Vice-Councilor, Councilor, Recording Secretary, Vice President of Region III (two years), Doctors' Day Chairman, and Research and Romance of Medicine Chairman.

Closer to home, in San Antonio, Mrs. Milburn has continued to serve her local Bexar County Auxiliary, and was involved with the setting up of a computerized Geriatric Information Center through the medical society. She has served as county and state President. She was Parliamentarian for the state auxiliary and on the TMA Physicians Benevolent Fund Committee in 1987.

Mrs. Fischer to Preside

More than 200 spouses of physicians are expected to attend the Auxiliary's business sessions, over which Mrs. Denny Fischer (Herman) of Clarksburg, President, will preside.

Dr. Cordell A. De La Pena of Clarksburg, WVSMA President, and Merwyn G. Scholten, WVSMA Executive Director, will be recognized for brief remarks prior to Mrs. Strauss's address Thursday morning.

An invitation has been extended to Auxiliary members to attend the formal opening ceremonies of the Association's 121st Annual Meeting beginning at 8:45 A.M. Thursday in the Theater. John J. H. Schwarz, M.D., Michigan State Senator, Battle Creek, will deliver the keynote Thomas L. Harris Address, "The Physician in Politics: An Imperative for the 1990s."

Auxilians also are invited to attend the second session of the WVSMA House of Delegates beginning at 2:30 P.M. Saturday in the Chesapeake Room. James E. Davis, M.D., of Durham, North Carolina, AMA President, will speak on "Medicine in the 1980s and 1990s."

During the second Auxiliary session Friday morning, Mrs. Strauss will install Mrs. Ginny Reisenweber (Harvey) of Martinsburg as President, and other new officers. Mrs. Reisenweber will give her inaugural address.

For other scheduled activities, see the official Auxiliary program in this issue of the *Journal*.

Young Journal Author's Article Leads to California Trip

It sounded like a TV game show prize but it actually was the result of unusual talent and scholarship.

Scott Caveney of Wheeling was invited to play in the National Reye's Foundation Celebrity Golf Tournament held in June at the El Caballero Country Club at Tarzana, California.

Scott, 18, a pre-med student at West Virginia University, was invited because of the publication in the May issue of the *Journal* of his research article, "Molecular Integrity of Aspirin in Relation to Reye's Syndrome." His paper and exhibit won first place in the West Virginia Science Talent Search sponsored by Westinghouse and the West Virginia Academy of Science in 1987 as well as a number of other awards.

Since its inception, the golf tournament has been co-hosted by two celebrities, Harvey Korman and McLean Stevenson, who have continued to be an important part of the annual event.

Scott was called by Mrs. Jill Slavin of Encino, California, Chairperson and founder of the tournament. Over the years, this event has contributed many thousands of dollars to the Foundation to aid in its awareness and research programs.

Mrs. Slavin's daughter, Jaime Beth, died of Reye's Syndrome at age 16, and this tourney was launched in tribute to her. Mrs Slavin was impressed that scott researched and published his article concerning this fatal disease associated with children. Asked if the celebrities were aware of his article, Scott replied, "Mrs. Slavin had showed it to all the people before I got there."

Scott Caveney of Wheeling, left, and Harvey Korman at the National Reye's Foundation Celebrity Golf Tournament in California.

Caveney, a member of the 1986-87 City Championship golf team at the Linsly school in Wheeling, won the longest drive contest while playing in Harvey Korman's fivesome.

Other celebrities who played were Dick Van Dyke (whose granddaughter died of Reye's), Jack Carter, David Doyle, Alex Trebek, Mike Connors, Peter Marshall, Hal Linden, Tom Dreesen, and Steve Yeager, among others.

Scott had brunch with these stars and others, played in the tournament, attended a banquet with the celebrities, and was entertained by a show presented by them after dinner. There were 170 golfers and 380 people for dinner.

"It was just such an interesting day. It was unbelievable!," he commented. A week-end houseguest of the Slavins, Scott said that he was most impressed with "meeting all the stars and the fact that they would spend so much time preparing for this event."

He also was interviewed about Reye's Syndrome research by a CNN TV newsperson. This came about when the reporter asked Harvey Korman for an interview. "Why don't you talk to the young man over there?," said Korman, indicating Caveney.

His auspicious link with the Foundation will continue in 1989 when he will present his paper at the Foundation's 15 annual national convention.

The budding researcher has completed his freshman year at WVU as a 4.0 student under a full, four-year WVU Foundation scholarship.

He is the son of Dr. and Mrs. James Caveney. Doctor Caveney is a Wheeling orthodontist.

New Members

The following physicians were welcomed in June as new members of the West Virginia State Medical Association:

Boone

A. Ranga Swamy, M.D., PO Box 24, Wharton, 25208

Cabell

Roger Dean Bruce, M.D., Marshall Medical School, Huntington 25701, Pediatrics

Ahmet H. Ozturk, M.D., PO Box 528, Huntington 25701, Anesthesiology

Eduardo Pino, M.D., Marshall Medical School, Huntington 25701, Pediatrics

Ulf Westblom, M.D., Marshall Medical School, Huntington 25701, Internal Medicine/Infectious Disease

Kanawha

Harry E. Duncan, Jr., M.D., Suite 509, 3100 MacCorkle Avenue, SE, Charleston 25304, Internal Medicine/Gastroenterology

John M. Eckerd, M.D., WVU Health Sciences Center, 3110 MacCorkle Avenue, SE, Charleston 25304, Pediatric Cardiology

Candace A. McCormick, M.D., 300 Flintlock Road, Charleston 25314, Pediatric Anesthesiology

James E. McJunkin, M.D., WVU Health Sciences Center, 3110 MacCorkle Avenue, SE. Charleston, 25304, Pediatrics

Basil L. Pugh, M.D., Star Route 4, Box 128, Ivydale 25113, Internal Medicine

Kimberly B. Pugh, M.D., Star Route 4, Box 128, Ivydale, 25113, Internal Medicine

Parkersburg

Corazon S. David, M.D., Garfield Avenue, Parkersburg 26101, Pediatrics

Western

Naba Goswami, M.D., 122 Pinnell Street, Ripley 25271

Residents

James P. Anderson, M.D., 101 Sanders Lane, Morgantown 26505

Bobby A. Miller, M.D., 147 East Hillview Drive, Morgantown 26505

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Sept. 3, Cardiology Day*
Sept. 10, Psychiatry*
Sept. 16-17, OB/GYN*
Sept. 17, Oncology*
Oct. 7-8, Diagnostic Ultrasound
Oct. 7-8, Pediatric Oktoberfest
Oct. 14, 9th Annual Ophthalmology Conference: Glaucoma Symposium
Oct. 15, 9th Annual Ophthalmology Conference: Scientific Sessions
Oct. 20-22, 14th Annual Hal Wanger Family Practice Conference*
Oct. 29, Occupational Medicine*
Oct. 29, Pat Tuckwiller Annual Scientific Seminar*
Nov. 4-6, Hypnosis Workshop
Nov. 19, Emergency Medicine*

*In conjunction with WVU football games

CAMC/West Virginia University, Charleston Division

Aug. 5, Ultrafast CT Scanning
Aug. 6-7, Advanced Trauma Life Support
Sept. 14, Hypertension: Protecting the Patient
Sept. 17, Swallowing Disorders
Sept. 20, Advanced Medline
Oct. 19, Faculty Research Day
Nov. 5, Sleep Disorders
Nov. 12, Trauma Seminar

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown
☐ WVU Medical Center-Charleston Division/CAMC
• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Aug. (vacation)

Brownsville, PA, ★ General Hospital, 11 A.M.—Aug. (vacation)

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Aug. 11, Pediatric Cardiology: What to Do About Heart Murmurs, John M. Eckerd, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Aug. 17, Arthritis, Maryann Antonelli, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Aug. 2, Pediatric Gynecology: Common Problems & Approaches, Donald Cox, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Aug. 3, Update COPD, Mahendra Patel, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Aug. 18, Subarachnoid Hemorrhages (speaker tba)

Kingwood, ★ Preston Memorial Hospital—Aug. (vacation)

Logan, • General Hospital, 11:30 A.M.—Aug. 19, Hodgkin's Disease, Steven Jubelirer, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Aug. (vacation)

Man, • Appalachian Regional Hospital, 7 P.M.—Aug. 16 (tba)

Martinsburg, ★ City Hospital—Aug. (vacation)

Martinsburg, ★ V.A. Medical Center, 2 P.M.—Aug. (vacation)

Montgomery, • General Hospital, 12 P.M.—Aug. 3, Commonly Used Anesthetic Agents (speaker tba)

New Martinsville ★ Wetzel County Hospital, 12 P.M.—Aug. (vacation)

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Aug. (vacation)

Parkersburg, ★ Camden-Clark Hospital—Aug. (vacation)

Ripley, • Jackson General Hospital, 12:30 P.M.—Aug. 12 (tba)

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Aug. (vacation)

Spencer, • Roane General Hospital, 12:30 P.M.—Aug. 16, Obstetrical Emergencies (speaker tba)

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Aug. (vacation)

Uniontown PA, ★ Uniontown Hospital—Aug. (vacation)

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Aug. (vacation)

Welch, ☐ Welch Public Library, 12 P.M.—Aug. (vacation)

Weston, ★ Stonewall Jackson Hospital, 6 P.M.—Aug. (vacation)

Wheeling, ★ Ohio Valley Medical Center, 8 P.M.—Aug. (vacation)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Aug. (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library 4 P.M.—Aug. (vacation)

Williamson, ☐Memorial Hospital Cafeteria, 6:30 P.M.—Aug. (vacation)

Awards Presented By WVU, Charleston

Area faculty, residents and students were honored in June by the West Virginia University Health Sciences Center/Charleston Division and the Charleston Area Medical Center.

The Clinician of the Year Award went to Richard E. Kleinmann, M.D., Associate Professor of Medicine.

Other honors awarded by departments were Behavioral Medicine and Psychiatry's Dr. Daniel D. Upthegrove Award to Thomas E. Ellis, Psy.D.; Family Medicine's Faculty Recognition Award to Donald H. Moore, M.D.; Internal Medicine's Clinical Faculty Award to Steven J. Jubelirer, M.D., and the Chief Resident Award to Robin R. Meek, M.D.; Obstetrics-Gynecology's Teacher of the Year Award to Ward W. Maxson, M.D.; Pediatrics' Attending of the Year Award to James E. McJunkin, M.D.; and Surgery's Vincent von Kern Award to Robert E. Kusminsky, M.D.

Dean's prizes for outstanding residents were awarded by Associate Vice President for Health Sciences/Charleston Division William O. McMillan, Jr., M.D., to Drs. Avis A. Artis, Jeffrey V. Ashley, Amira A. Helal, Bruce A. Hoak, Deborah L. Hogan, James J. Pettit and Bennett A. Thomas. Also assisting in the presentation was Edward H. Maier on behalf of the Sarah Pauline Maier Foundation, Inc.

Residents receiving first-place prizes for research were Mark Bates, M.D., for Original Research and for Case Presentation, and Ronald J. Sutor, M.D., for Subject Review.

Other residential prizes were awarded to Drs. Avis A. Artis, David E. Harman, MaryAnn J. Kaveski, Charles C. McCormick, Juan J. Mancillas and Samuel S. Newman.

Fourth-year medical students Anne K. McBride and David M. Vaziri also received research prizes.

Moderator for Research Day was Morgantown's Gordon F. Murray, M.D., Professor and Chairman of the Department of Surgery. Other judges were Drs. James E. McJunkin, Sherif G. Awadalla and Steven L. McCormick, all from the Charleston Division.

Family Physicians' Conference in Fall

The 14th annual Hal Wanger Family Practice Conference will be held October 20-22 at the West Virginia University Health Sciences Center in Morgantown.

Some 20 presentations are scheduled, beginning Thursday morning October 20, and ending at noon Saturday. A public session on "The Patient's Role in Diabetic Management" also is planned at 7 P.M. Thursday.

Sponsors are WVU School of Medicine, Department of Family Practice; West Virginia Chapter of the American Academy of Family Physicians, and the WVU Office of Continuing Education.

Topics will include:

Thursday—Subtle Seizures in Children; "Why Won't My Child Sleep?"; Methotrexate in Rheumatoid Disease; "The Teeth are Fine; the Gums are Going"; Including Pulmonary Emboli in the Differential; "From Broken Bones to Kidney Stones . . ."; Managing the Shift-Worker Diabetic; and Selecting Patients for By-Pass Surgery;

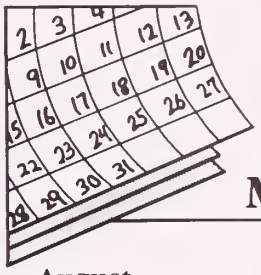
Friday—Lipoprotein Abnormalities in Diabetes; The Adolescent Hypertensive; The Many Faces of Dementia; Smoking Cessation Protocol; Management of Pleural Effusion; Who Benefits From Back Surgery, Seizure Control in Adults, and Hand Trauma, an E.R. Nightmare;

Saturday—Chronic Pain, Where to Start!; Neuropsych Evaluation in Head Trauma; Opening the Door for Closet Alcoholics; and Impact! Adolescent Suicide.

John W. Traubert, M.D., Associate Dean, Student Affairs, is Course Director.

The program is approved for 16 hours of Category 1 cedit, and has been reviewed and is accepted for 16 prescribed hours by the AAFP.

For additional information, call the CME Office at (304) 293-3937.



Medical Meetings

August

16-21—121st Annual Meeting, WV State Medical Assoc., White Sulphur Springs.

September

10—CNA First Generation Loss Control Seminar, Huntington.

14-16—Am. College of Nutrition, New Orleans.

15-18—Am. College of Nuclear Medicine, Lake Tahoe, Nev.

21—CNA Second Generation Loss Control Seminar, Wheeling.

22-24—Am. Academy of Facial Plastic & Reconstructive Surgey, Washington, DC.

23-30—Am. College of Radiology, Cincinnati.

25-28—Society of Thoracic Surgeons, New Orleans.

25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.

26-29—Am. College of Emergency Physicians, New Orleans.

October

3-6—AAFP, New Orleans.

3-7—Am. College of Chest Physicians, Anaheim, Calif.

8-12—Am. Academy of Ophthalmology, Las Vegas.

8-12—Am. Society of Anesthesiologists, San Francisco.

12—CNA Second Generation Loss Control Seminar, Beckley.

13-16—Am. Society of Internal Medicine, Atlanta.

14-19—Am. College of Gastroenterology, New York.

23-26—Medical Group Management Assoc., Kansas City, Mo.

November

6-9—Southern Medical Assoc., New Orleans.

12—Laser Surgery Seminar V, Charleston.

December

4-7—AMA Interim Meeting, Dallas.

1989

March

17-19—22nd Mid-Winter Clinical Conference, Huntington.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Convention Program

121st ANNUAL MEETING

West Virginia State Medical Association

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 16-21, 1988

PROGRAM COMMITTEE

Robert D. Hess, M.D.
Clarksburg
Chairman

Bill M. Atkinson, M.D.
Parkersburg

Michael J. Lewis, M.D.
Morgantown

Catalino B. Mendoza, Jr., M.D.
Clarksburg

Maurice A. Mufson, M.D.
Huntington

WEDNESDAY MORNING
August 17
(Eastern Daylight Time)

12 Noon-4:30—Registration, Greenbrier Registration Lobby.

9:30—Pre-Convention Meeting of the Council. Charles E. Turner, M.D., *Presiding* (McKinley Room).

WEDNESDAY AFTERNOON

2:45—First Session of the House of Delegates. Cordell A. De La Pena, M.D., *Presiding* (Chesapeake Room).

Invocation—Michael M. Stump, M.D., Elkins.

Presidential Address: Cordell A. De La Pena, M.D., President, West Virginia State Medical Association.

Presentation of AMA-ERF Grants to the West Virginia and Marshall University Schools of Medicine.

Business Meeting.

WEDNESDAY EVENING

5:00-6:00—Seminar, Parker/Hunter Incorporated, Clarksburg, WV. Fred A. Scheeren, C.F.P., Vice President and Branch Manager, *Presiding* (Taft Room).

"Pension and Profit Sharing Plans After the Tax Reform Act of 1986."

Presenters: Fred A. Scheeren
Mark K. Dunbar, Senior Consulting Actuary, Halliwell & Associates

Robert V. Henderson, Senior Portfolio Analyst, Parker/Hunter

6:30-7:30—President's Reception. Parker/Hunter, *host* (Taft Room Foyer).

THURSDAY MORNING
August 18

8:00-4:30—Registration, Eisenhower Room, Exhibit Area.

First General Session
(Theater)

Bill M. Atkinson, M.D., *Moderator*

Opening Exercises

8:45—Call to Order—Cordell A. De La Pena, M.D., President, West Virginia State Medical Association.

Invocation—James L. Bryant, M.D., Clarksburg.

Address of Welcome—Cordell A. De La Pena, M.D.

Introduction of Members of the 1988 Program Committee.

9:00—"The Thomas L. Harris Address"—The Honorable John J. H. Schwarz, M.D., Michigan State Senate, Battle Creek, MI. Subject: "The Physician in Politics: An Imperative for the 1990s."

9:45—Coffee Break to Visit Exhibits.

10:15—Jeffery C. Hutzler, M.D., Program Director of the Outpatient Section, Department of Psychiatry, Cleveland Clinic Foundation, Cleveland, OH. Subject: "The Psychosocial Management of the AIDS Patient and Family."

11:00—Timothy B. Norbeck, Executive Director, Connecticut State Medical Society, New Haven, CT. Subject: "Mandatory Assignment and Rising Health Care Costs: A Response to the Critics."

11:45-Questions and Answers.

12:00—Recess for Lunch.

THURSDAY AFTERNOON

12:30—Luncheon Meeting, Component/Specialty Society Presidents and Hospital Chiefs-of-Staff/Medical Staff Presidents. Cordell A. De La Pena, M.D., President, *Presiding* (McKinley Room).

2:00—Golf, Tennis and Volley Ball Tournaments.

2:00—Open Meeting, WESPAC (West Virginia Medical Political Action Committee). Esther Weeks, Chairman, *Presiding* (Hayes Room).

4:00—Committee on Resolutions. Bill M. Atkinson, M.D., Chairman, *Presiding* (Tyler Room).

THURSDAY EVENING

6:30-7:30—Cocktail Party. CNA Insurance Company—"Your WVSMA-Sponsored Professional Liability Insurance Carrier;" McDonough Caperton Insurance Group—*hosts* (Eisenhower Room, Exhibit Area).

FRIDAY MORNING

August 19

Breakfast Meetings

7:00—Section on Internal Medicine. Maurice A. Mufson, M.D., *Presiding* (Jackson Room).

Guest Speaker: Robert C. Touchon, M.D., Professor of Medicine and Section Chief, Cardiovascular Medicine, Department of Medicine, Marshall University School of Medicine, Huntington. Subject: "The Clinical Management of Lipid Disorders."

7:00—WV Chapter, American College of Surgeons. Thomas H. Chang, M.D., *Presiding* (Pierce Room).

Guest Speaker: Gordon F. Murray, M.D., Professor and Chairman, Department of Surgery, West Virginia University School of Medicine, Morgantown. Subject: "Coronary Bypass Surgery, 1988."

8:00-4:30-Registration, Eisenhower Room, Exhibit Area.

Second General Session (Theater)

James M. Stevenson, M.D., *Moderator*

8:45—James Lewis Griffith, J.D., Attorney at Law, Griffith & Burr, P.C., Philadelphia, PA. Subject: "A Defense Attorney's Perspective on Medical Liability."

9:30—Coffee Break to Visit Exhibits.

10:00—Eugene A. Stead, Jr., M.D., Florence McAlister Professor (Emeritus) of Medicine and Chairman, Department of Medicine, Duke University Medical Center, Durham, NC. Subject: "Sensible Practice of Medicine in a Technologically Oriented Society—Some Call This Ethics."

10:45—D. Verne McConnell, M.D., Wheeling, Clinical Professor of Medicine, West Virginia University School of Medicine. Subject: "Professional Liability Insurance in West Virginia: Controversial Surgical Procedures."

11:30—Questions and Answers.

12:00—Recess for Lunch.

FRIDAY AFTERNOON

12:30—Luncheon Meeting, Publications Committee. Stephen D. Ward, M.D., Chairman, *Presiding* (Lee Room).

12:30—Luncheon Meeting, West Virginia Medical Institute, Inc., Board of Trustees Meeting. Harry S. Weeks, Jr., M.D., *Presiding* (Wilson Room).

12:30—Luncheon Meeting, West Virginia Gastrointestinal Society. Thomas H. Chang, M.D., *Presiding* (McKinley Room).

Guest Speaker: Joseph E. Geenen, M.D., Clinical Professor of Medicine, Division of Gastroenterology, Medical College of Wisconsin, Milwaukee; and Director, Digestive Disease Center, St. Luke's Hospital, Racine, WI. Subject: "The Efficacy of S/O Manometry and Endoscopic Sphincterotomy in Patients with Post-Cholecystectomy Syndrome and Acute Recurrent Pancreatitis."

12:30—Luncheon with Speaker to Follow, West Virginia Psychiatric Association. Larry C. Smith, M.D., *Presiding* (Virginia Room).

Guest Speaker: Jeffery C. Hutzler, M.D., Program Director, Outpatient Section, Department of Psychiatry, Cleveland Clinic Foundation, Cleveland, OH. Subject: "AIDS: Problems in Psychiatric Management."

1:00—West Virginia Chapter, American College of Emergency Physicians. Rex Lasure, M.D., *Presiding* (Hayes Room).

Seminar: "Long Range Planning."

Guest Speaker: Constance Azzi, Ed.D., Director, Chapter Relations, American College of Emergency Physicians, Dallas, TX.

1:00—Business Meeting, West Virginia Orthopedic Society. Stephen I. Lester, M.D., *Presiding* (Taft Room).

2:00—West Virginia Chapter, American Academy of Pediatrics. Joseph W. Werthammer, M.D., *Presiding* (Jackson Room).

Guest Speaker: Mary Kathryn Hammock, M.D., Associate Professor of Surgery, Marshall University School of Medicine, Huntington. Subject: "Congenital Malformations of the Nervous System."

2:00—The West Virginia Academy of Ophthalmology. Michael A. Fiery, M.D., *Presiding* (Grant Room).

Guest Speaker: Joseph G. Feghali, M.D., Assistant Professor of Ophthalmology, West Virginia University School of Medicine, Morgantown. Subject: "Glaucoma in Infants and Children."

Business Meeting.

3:00—Section on Dermatology. William A. Welton, M.D., *Presiding* (Washington Room).

Case Presentations.

Guest Presenter: D. Verne McConnell, M.D., Wheeling, Clinical Professor of Medicine, West Virginia University School of Medicine.

3:00—West Virginia Radiological Society. James K. Sexton, M.D., *Presiding* (Pierce Room).

Guest Speaker: Thomas W. Greeson, J.D., Internal Legal Counsel, American College of Radiology, Reston, VA. Subject: "Legal Update from the American College of Radiology."

FRIDAY EVENING

5:00—Committee on Nominations. Carl J. Roncaglione, M.D., Chairman, *Presiding* (Tyler Room).

6:30-7:30—Cocktail Party. West Virginia University Alumni Association. James M. Stevenson, M.D., Interim Dean, WVU School of Medicine; and Richard H. Sibley, M.D., President, WVU School of Medicine Alumni Association, *co-hosts* (Spring Room).

6:30-7:30—Cocktail Party. West Virginia Chapter, Medical College of Virginia Alumni Association. Stephen M. Ayres, M.D., Dean, Medical College of Virginia/Virginia Commonwealth University, *in charge* (McKinley Room).

6:30-7:30—Cocktail Party. Medical Alumni Association, University of Virginia. William C Morgan, Jr., M.D., *Presiding* (Old White Club).

SATURDAY MORNING
August 20
Breakfast Meeting

7:00—Committee on Cancer. Catalino B. Mendoza, Jr., M.D., *Presiding* (Grant Room).

Third General Session (Theater)

Lester R. Bryant, M.D., *Moderator*

8:00-10:30—Registration, Eisenhower Room, Exhibit Area.

8:45—Gordon F. Murray, M.D., Professor and Chairman, Department of Surgery, West Virginia University School of Medicine, Morgantown. Subject: "Cardiovascular Surgery at WVU in 1988."

9:30—Coffee Break to Visit Exhibits.

10:15—Robert C. Touchon, M.D., Professor of Medicine and Section Chief, Cardiovascular Medicine, Department of Medicine, Marshall University School of Medicine, Huntington. Subject: "Heart Disease in West Virginia: A Plan for Prevention and Rehabilitation."

11:00—Joseph E. Geenen, M.D., Clinical Professor of Medicine, Division of Gastroenterology, Medical College of Wisconsin, Milwaukee; and Director, Digestive Disease Center, St. Luke's Hospital, Racine, WI. Subject: "Endoscopic Therapy of Biliary and Pancreatic Disease."

11:45—Questions and Answers.

12:00—Recess for Lunch.

SATURDAY AFTERNOON

11:00-3:00—Registration, Greenbrier Registration Lobby.

12:30—Luncheon Honoring Past Presidents, Visiting Neighboring State Presidents and 50-Year Medical Graduates. Charles E. Turner, M.D., Immediate Past President; and Cordell A. De La Pena, M.D., President, *co-hosts* (McKinley Room).

1:00—Business Meeting, West Virginia Young Physicians. Stephen L. Sebert, M.D., *Presiding* (Jackson Room). Guest Speaker: George E. McGee, M.D., Chairman-Elect, American Medical Association Young Physicians Section, Hattiesburg, MS.

2:30—Second and Final Session of the House of Delegates. Cordell A. De La Pena, M.D., *Presiding* (Chesapeake Room).

Invocation—William E. Gilmore, M.D., Parkersburg.

Address: James E. Davis, M.D., President, American Medical Association, Durham, NC. Subject: "Medicine in the 1980s and 1990s."

Presentation of New Officers of the West Virginia State Medical Association Auxiliary.

Presentation of Honor Guests.

Business Meeting.

Election of Officers.

Installation of Bill M. Atkinson, M.D., Parkersburg, as President of the West Virginia State Medical Association.

Address: Bill M. Atkinson, M.D.

Adjournment.

SATURDAY EVENING

6:30-7:30—Reception Honoring Newly Installed Officers of the Association and Auxiliary. McDonough Caperton Association Group, *host* (Ballroom).

A Word Of Thanks

The 1988 Program Committee, officers, members and staff of the West Virginia State Medical Association wish to acknowledge with sincere thanks grants received from the following firms to help support the Scientific Program for this year's 121th Annual Meeting:

GLAXO

ELI LILLY AND COMPANY
PHARMACEUTICAL DIVISION

SMITH KLINE & FRENCH LABORATORIES

THE UPJOHN COMPANY

(The firms listed above are those which had allocated funds to the Scientific Program as this issue of *The Journal* went to press. Additional contributors will be listed in the Official Program to be distributed at the Greenbrier in White Sulphur Springs.)

. . . And, We Wish To Thank:

CHAPMAN PRINTING COMPANY for hosting the Pre-Convention Luncheon for the Executive Committee and Council on Wednesday, August 17.

PARKER/HUNTER for hosting the President's Reception on Wednesday evening, August 17.

WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE for providing refreshments for one of the coffee breaks in the Exhibit Center.

PIE MUTUAL INSURANCE COMPANY for providing refreshments for one of the coffee breaks in the Exhibit Center.

CNA INSURANCE COMPANY and McDONOUGH CAPERTON INSURANCE GROUP for hosting the Thursday evening, August 18, Reception in the Exhibit Center.

WVU School of Medicine, Medical College of Virginia and University of Virginia School of Medicine Alumni for hosting Receptions on Friday evening, August 19.

McDONOUGH CAPERTON INSURANCE GROUP for hosting the Saturday evening, August 20, Reception honoring outgoing and incoming officers of the WVSMA and Auxiliary.

MARION LABORATORIES for Golf Tournament prizes

A. H. ROBINS COMPANY for Tennis Tournament prizes.

THE GREENBRIER, White Sulphur Springs, for contributing the Grand Door Prize of a Winter Weekend for Two at the hotel.

Additional contributors will be listed in Official Program.

Delegates and Alternates

BOONE (2)—Names not submitted at *Journal* press time. See official program.

BROOKE (2)—Delegates, W. T. Booher, Jr., and Patsy P. Cipoletti, Jr., Wellsburg. Alternates, Michael P. Giannamore and Rogelio L. Velarde, Follansbee.

CABELL (14)—Names not submitted at *Journal* press time. See official program.

CENTRAL WEST VIRGINIA (4)—Names not submitted at *Journal* press time. See official program.

EASTERN PANHANDLE (5)—Names not submitted at *Journal* press time. See official program.

FAYETTE (3)—Delegates, Joe N. Jarrett, Oak Hill; Saghir Mir, Montgomery; M.U. Maminta, Mt. Hope. Alternates, O. P. Gosien, Oak Hill; A. M. Mirza, and Rolando C. Ramirez, Montgomery.

GREENBRIER VALLEY (4)—Names not submitted at *Journal* press time. See official program.

HANCOCK (4)—Delegates, Antonio S. Licata and Sarjit Singh, Weirton.

HARRISON (7)—Delegates, John A. Bellotte, Erlinda L. De La Pena, Robert D. Hess, Clarksburg; David R. Hess, Bridgeport; Jamie E. Lazaro and C. B. Mendoza, Jr., Clarksburg; Mehmet V. Kalaycioglu, Shinnston. Alternates, James L. Bryant, Clarksburg; Gaspar Z. Barcinas, Roberto Cunanan, and Sidney B. Jackson, Bridgeport; Douglas E. McKinney, Saad Mossallati and Louis C. Palmer, Clarksburg.

JEFFERSON (2)—Names not submitted at *Journal* press time. See official program.

KANAWHA (24)—Delegates, Constantino Amores and Alberto G. Capinpin, Charleston; Richard Capito, South Charleston; Stephen Paul Cassis, Jean P. and Jerill D. Cavender, Graciano Cendana, Robert James Clubb and Glenn Crotty, Jr., Charleston; W. Alva Deardorff, South Charleston; Donald E. Farmer, Robert L. Ghiz, David B. Gray, Thomas J. Janicki, J. L. Leef, Jr., James W. Kessel, Jimmie L. Mangus, Lewis H. McConnell, Donald H. Moore, and William O. McMillan, Jr., Warren Point, P. M. Rao, and F. Thomas Sporck, Charleston and Herbert A. Tipler, South Charleston.

Alternates, Alfonso Y. Amores, B. H. Avashia and Clinton A. Briley, Jr., Charleston, William D. Crigger, South Charleston; Daniel S. Foster, Roland Edward Hamrick, Jr., Sherman E. Hatfield, Jamil H. Khan, Lester Labus, Tony C. Majestro, Eric P. Mantz, and William C. Revercomb, Jr., Charleston; C. E. Stennett, South Charleston; Samuel A. Strickland, Charleston; Shirley Willis Trammell and Charles C. Weise, Charleston.

LOGAN (4)—Delegates, Carlos F. DeLara and Rodney L. Stephens, Logan; Thomas P. Long, Man. Alternates, Harry D. Fortner, Raymond O. Rushden and S. N. Subramaniam, Logan.

MARION (5)—Names not submitted at *Journal* press time. See official program.

MARSHALL (3)—Names not submitted at *Journal* press time. See official program.

MASON (2)—Names not submitted at *Journal* press time. See official program.

McDOWELL (3)—Delegates, Charito T. Flores, Arthur Allen Carr and Eugene Wei-Yu Kao, Welch. Alternates, Gary Piekarek, Louis A. Vega and Vy Van Phan, Welch.

MERCER (7)—Names not submitted at *Journal* press time. See official program.

MINGO (3)—Delegates, Pastor C. Gomez, Wiiliamson; T. John Thambidurai, Forest Hill, KY; C. H. Yajnik, Williamson. Alternates, Russell A. Salton, Liberty R. Tablante and Rao H. Vempaty, Williamson.

MONONGALIA (18)—Delegates, Carole Brooks Boyd, Thomas S. Clark, Douglas D. Glover, John Evan Jones, Richard S. Kerr, Roger E. King, Michael J. Lewis, Hugh A. Lindsay, Gary D. Marano, Martha Dilley Mullett, William Albert Neal, Francis H. Oliver, Richard John Pearson, Joseph J. Renn III, Ralph W. Ryan and Wade B. Stoughton, Morgantown.

OHIO (11)—Names not submitted at *Journal* press time. See official program.

PARKERSBURG ACADEMY (9)—Delegates, M.D. Avington, Paul W. Burke, Jr., and Humberto Escandon, Parkersburg; William E. Gilmore, Vienna; Stephen D. Hanna, Francis C. Huber, Jr., Daniel M. Lundblad, Michael A. Morehead and Harry Shannon, Parkersburg. Alternate, Rutherford C. Sims, Parkersburg.

POTOMAC VALLEY (3)—Delegates, Joseph E. Ambrose, Carl A. Liebig and Nelia A. Orbeta, Keyser.

PRESTON (2)—Delegates, Timothy C. Miller and Michael R. Schwarzenberg, Kingwood. Alternates, Thomas A. Haymond, Reedsville; Bernice A. Schwarzenberg, Kingwood.

PUTNAM (2)—Names not submitted at *Journal* press time. See official program.

RALEIGH (8)—Delegates, Joshy Abraham, M. Jamil Ahmed and William C. Covey, Jr., Beckley; Eileen C. Catterson, Pineville; Carlos E. Lucero, Robert Pulliam, Richard D. Richmond and Nancy R. Webb, Beckley. Alternates, C. Richard Daniel, Shoukry L. Francis, Lewis W. Gravely, M. Khalid Hasan, Ramon C. Jereza, Norman Wayne Taylor, Richard M. Thompson and R. J. Yates, Beckley.

SOUTH BRANCH VALLEY (2)—Names not submitted at *Journal* press time. See official program.

SUMMERS (2)—Names not submitted at *Journal* press time. See official program.

TYGART'S VALLEY (5)—Delegates, Melanio D. Acosta, Jr., Parsons; Fulvio R. Franyutti, Mary Elizabeth Myers and Karl J. Myers, Jr., Philippi; Samuel M. Santibanez, Grafton. Alternates, Charles L. Arnett, Philippi; James B. Magee, Michael M. Stump and Joseph A. Tavolacci, Elkins; Christopher Villaraza, Grafton.

WESTERN (3)—Names not submitted at *Journal* press time. See official program.

WETZEL (2)—Names not submitted at *Journal* press time. See official program.

WYOMING (2)—Delegates, Lee B. Smith, Mullens. Alternate, Manuel C. Barit, Mullens.

Official Program

64th ANNUAL MEETING

West Virginia State Medical Association Auxiliary

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 17-20, 1988

WEDNESDAY AFTERNOON
August 17

1:00-5:00—Registration, Lower Lobby*

3:30—Pre-Convention Board Meeting, Mrs. Denny Fischer (Herman), President, presiding (Hayes Room).

6:30—WVSMA President's Reception. (Taft Room). Auxilians cordially invited.

THURSDAY
August 18

9:00-3:00—Registration, Lower Lobby

9:00—WVSMA's Thomas L. Harris Address—The Honorable John H. Schwarz, M.D. (Theater).

9:45—Formal Opening of the Convention, Mrs. Denny Fischer (Herman), President, presiding (Hayes Room).

Invocation—Mrs. Sue Bryant (James)

Pledge to Flag and Pledge of Loyalty—Mrs. Ginny Reisenweber (Harvey).

In Memoriam—Mrs. Sue Bryant (James).

Introduction of Honored Guests and Past State Presidents.

Presentation of Cordell De La Pena, M.D., President, West Virginia State Medical Association, and Merwyn G. Scholten, Executive Director, WVSMA.

Introduction of Convention Chairmen, Mrs. Eileen Martin (Bruce) and Mrs. Betty Clark (Sheffer).

Roll Call of Delegates—Mrs. Helen Bell (David), Recording Secretary.

Declaration of a Quorum—Mrs. Esther Weeks, Jr. (Harry), Parliamentarian.

Keynote Address—Mrs. Mary Strauss (Albert J., Jr.), President, American Medical Association Auxiliary.

Credentials and Registration—Mrs. Sally Lowe (Robert).

Convention Rules of Order—Mrs. Eileen Martin (Bruce).

Report of the 1987 Convention Reading Committee—Mrs. Linda Kress (Donald) and Mrs. Janie Altmeyer (Robert).

Treasurer's Report—Mrs. Alice Hovis (Logan).

Recommendations from the Pre-Convention Board Meeting.

New Business.

Election of the 1989 Nominating Committee.

Reports of Officers and Standing Committee Chairmen (These will not be read, but are published in the Annual Program Book).

Presentation of Regional Directors:

Northern—Mrs. Majorie Naymick (George)

Southern—Mrs. Ann McRae (Grady)

Eastern—Mrs. Sara Townsend (Vincent)

Western—Mrs. Marianne Tweel (Harry)

Central—Mrs. Joyce Magee (Alfred)

Announcements.

Recess.

6:30—WVSMA Cocktail Party (Eisenhower Room).

FRIDAY
August 19

9:00-3:00—Registration, Lower Lobby
8:00—Past Presidents' Breakfast (Wilson Room).

9:30—Auxiliary's Second General Session (Hayes Room)

Introduction of Honored Guests and Past State Presidents.

Roll Call of Delegates—Mrs. Helen Bell (David).

Declaration of a Quorum—Mrs. Esther Weeks (Harry).

Presentation of AMA-ERF Awards—Mrs. Marian Thompson (James) and Mrs. Mary Harrison (Charles), Co-Chairmen. Recognition of AMA-ERF Grants to the West Virginia and Marshall University Schools of Medicine.

Presentation of Membership Awards—Ginny Reisenweber (Harvey), President Elect and Membership Chairman.

Address—Mrs. Joan Milburn (Graham B.), President, Southern Medical Association Auxiliary.

Convention Announcements.

Reports of Convention Committees:

Credentials and Registration—Mrs. Sally Lowe (Robert).

Press and Publicity—Mrs. Lillian Gordon (Paul).

Unfinished Business.

Report of Tellers.

Report of the 1988 Nominating Committee—Mrs. Linda Turner (Charles), Immediate Past President and Chairman of Nominating Committee.

Election of Officers.

Installation of Officers—Mrs. Mary Strauss (Albert J., Jr.), President, AMA Auxiliary.

Presentation of President's Pin and Gavel—Mrs. Denny Fischer (Herman).

Presentation of Past President's Pin—Mrs. Linda Turner (Charles).

Inaugural Address—Mrs. Ginny Reisenweber (Harvey).

Announcements.

Adjournment.

12:30—Presidents Luncheon (Crystal Room).

2:30—Bridge, Parkersburg Academy, Host (Trellis Lobby).

Golf, Cabell County, Host.

Tennis, Raleigh County, Host.
(Times for golf and tennis to be announced)

SATURDAY
August 20

10:00—Post-Convention Board Meeting—Mrs. Ginny Reinsenweber (Harvey), President, presiding (Hayes Room).

2:30—Second and Final Session of WVSMA House of Delegates (Chesapeake Room).

Address by James E. Davis, M.D., President, American Medical Association.

Presentation of New Officers of Auxiliary to the West Virginia State Medical Association.

Installation of Bill M. Atkinson, M.D., as 1988-89 President of the West Virginia State Medical Association.

(Auxiliary members are invited and urged to attend.)

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*You must be registered to participate in the business sessions and recreational activities. Registration fee, $5.

Commercial Exhibits

SANDOZ PHARMACEUTICALS
East Hanover, NJ
Booth 1

Sandoz Pharmaceuticals invites you to stop by their exhibit where representatives will be pleased to provide information on products and educational materials they have available.

Representatives: Not available at press time

BECTON DICKINSON PRIMARY CARE DIAGNOSTICS
Franklin Lakes, NJ
Booth 2

Stop by the Becton Dickinson Primary Care Diagnostics booth and see the award winning QBC® II CENTRIFUGAL HEMATOLOGY ANALYZER. Get seven hematology parameters as easy as a spun hematocrit. QBC — the only hematology analyzer designed specifically for the physician's office. Also featured will be Becton Dickinson - QTEST™ STREP, QTEST™ PREGNANCY and QTEST™ OVULATION.

Representatives: Jim Byrd, John Rohe and Bob Michalochick

DISABILITY DETERMINATION SECTION
Charleston, WV
Booth 3

You are cordially invited to visit the Disability Determination Section exhibit, Booth 3, and meet our representatives. Revised Categorical Listing of Impairments and Consultative Examinations Guide for Physicians will be featured.

Representatives: David H. Cleland and Tom Davis

SEARLE PHARMACEUTICALS INC.
Hurricane, WV
Booth 4

Please stop by Booth 4 and visit with representatives of Searle Pharmaceuticals, Inc. Featured products include Calan SR, "the first 'once-a-day' calcium channel blocker indicated for hypertension"; Kerlone, the newest, most innovative and selective beta-blocker; and the all new nitrodisc, completely redesigned for maximum efficiency, comfort and looks.

Representative: Tim Smith and Greg Casey

GLAXO, INC.
Research Triangle Park, NC
Booth 5

Representatives of Glaxo, Inc. invite you to stop by Booth 5 and discuss their products.

Representatives: Not available at press time

DORSEY PHARMACEUTICALS
East Hanover, NJ
Booth 6

Dorsey Pharmaceuticals invites you to stop by their exhibit where representatives will be pleased to provide information on their featured products and educational materials.

Representatives: Not available at press time

PIE MUTUAL INSURANCE COMPANY
Oak Hill, WV
Booth 9

Representatives of PIE Mutual Insurance Company invite you to stop by Booth 9 where professional liability information will be available.

Representatives: Theron O. Cruise, Jr., Larry E. Rogers, Dan Goheen, Jay Smith and John Esterle

GEIGY PHARMACEUTICALS
Summit, NJ
Booth 10

Representative: Jimmy J. McGlosson

ICI PHARMA
Wilmington, DE
Booth 11

Please stop by Booth 11 and visit with representatives of ICI Pharma where anti-hypertensive medications, Tenormin and Tenoretic, will be featured.

Representatives: Deborah S. Casto, Ed Turley and Steven Chizik

MCDONOUGH CAPERTON ASSOCIATION GROUP
Charleston, WV
Booth 12

McDonough Caperton Association Group cordially invites you to Booth 12 where representatives will be glad to discuss with you professional liability insurance.

Representatives: Steve Brown, Sara Dore, Ralph Ellis, Bob Harding, Pat Parsons, Leslie Rogers and Dennis J. (Skip) Vogelsberger

METPATH
South Charleston, WV
Booth 13

Representatives of MetPath invite you to stop by Booth 13 where they will be exhibiting products pertaining to laboratory tests and procedures.

Representatives: Evette Sheppard, Richard Conti and Cynthia Stutler

BRISTOL LABORATORIES
Evansville, IN
Booth 14

Bristol Laboratories will occupy Booth 14 and invite you to stop by and meet representatives who will welcome the opportunity to discuss products and services of interest to you. Featured products will be Naldecon, Naldecon X-Line, Questran and K-Lyte.

Representative: Lisa A. Miller

SUPPORT SYSTEMS INTERNATIONAL
Charleston, SC
Booth 17

Support Systems International will occupy Booth 17. Please stop by and discuss their featured products, Clinitron® and Flexicair® .

Representatives: Donna Moore, Mary Jo Weiss and Robert M. Liberer.

ABBOTT LABORATORIES
North Chicago, IL
Booths 20 & 21

Representatives of Abbott Laboratories invite you to stop by Booths 20 & 21 and discuss their featured products: Hytrin,™ PCE® and Tranxene® T-Tab.™

Representatives: Not available at press time

U.S. ARMY HEALTH PROFESSIONAL SUPPORT AGENCY
Falls Church, VA
Booth 22

Please stop by Booth 22 where representatives will discuss with you physician placement service for the U.S. Army Medical Department, both active duty and reserve. Information will be available concerning financial assistance programs for medical students, graduate medical education opportunities, as well as the large number of challenging positions in both the Active Army and the U.S. Army Reserve.

Representatives: Not available at press time

UNITED STATES AIR FORCE
Salem, VA
Booth 25

Representatives invite you to stop by Booth 25 and discuss with them recruitment of medical personnel for active duty.

Representatives: Capt. Danny Richardson and MSgt. Edward Blevins

THE PAUL REVERE INSURANCE GROUP
Charleston, WV
Booth 27

Paul Revere Insurance Group (#1 in Professional Disability Insurance for Physicians) invites you to visit Booth 27 where representatives will be prepared to discuss and compare Disability Income Insurance, Medical Insurance and other Financial Service Products.

Representatives: William J. Seiber, CLU, ChFC, and Nancy Manfredi

SCHERING CORPORATION
Kenilworth, NJ
Booth 29

Vancenase AQ, Proventil Repetabs, Theo-Dur and Proventil inhaler will be featured at Booth 29, occupied by Schering Corporation.

Representatives: Joseph Sassler and Buster Brown

MARION LABORATORIES, INC.
Kansas City, MO
Booth 30

Marion Laboratories, Inc. invites you to stop by Booth 30 where their featured products will include CARDIZEM® (diltiazem HCl) and CARAFATE® (sucralfate).

Representatives: Jeff Walz and Susan Polka

SMITH KLINE & FRENCH LABORATORIES
Philadelphia, PA
Booth 31

We cordially invite you to visit the Smith Kline & French Laboratories exhibit in Booth 31 where representatives will be on hand to answer your questions and provide information on their products and services.

Representatives: Marsha Gonos, Lee Woodburn, Donna Swain, Derwin Woody and Rhonda Kneafsey

CUTTER BIOLOGICAL, MILES INC.
Berkeley, CA
Booth 32

IBIG GAMIMUNE,® PLASMANATE,® PROLASTIN® and HYPRO-D® will be featured in Booth 32. Cutter Biological representatives invite you to stop by and visit with them.

Representatives: T. G. Bud Haley and Michael P. Principe

MEAD JOHNSON PHARMACEUTICAL DIVISION
Evansville, IN
Booth 33

We cordially invite you to visit Booth 33 and meet representatives of Mead Johnson Pharmaceutical Division who will welcome the opportunity to discuss products and services of interest to you. Featured will be, BuSpar, Desyrel, Duricef and Klotrix.

Representative: Steven E. Long and Richard P. Micali

KEY PHARMACEUTICALS
Pittsburgh, PA
Booth 34

Key Pharmaceuticals invites you to visit Booth 34 where representatives will be on hand to discuss their featured products: Nitro-Dur II, K-Dur and Normodyne.

Representatives: Rob Jarvis and Marcia Huey

INSURANCE CORPORATION OF AMERICA
Houston, TX
Booth 35

ICA cordially invites you to stop by and visit Booth 35 where representatives will welcome the opportunity to discuss with you professional liability insurance for physicians and surgeons.

Representative: Jerry Morgan

LINDE HOMECARE MEDICAL SYSTEMS
Charleston, WV
Booth 36

You are cordially invited to stop by Booth 36 where representatives from Linde Homecare Medical Systems will have on display oxygen therapy equipment, DME and hi-tech homecare products.

Representatives: Ed Bridgette and Tom Brown

MERCK SHARP & DOHME
West Point, PA
Booth 37

Representatives: Not available at press time

ROCHE LABORATORIES
Nutley, NJ
Booth 38

Representatives cordially invite you to stop by and visit Booth 38. Featured products will include Rocephin, Zantac and Versed.

Representatives: Cheri Freeman, Pete Francesa and Darleen Martin

WYETH LABORATORIES
Richmond, VA
Booth 39

Orudis and Sectral will be featured products at Booth 39 which will be occupied by Wyeth Laboratories. Representatives invite you to stop by and discuss their products with them.

Representatives: Terry Shank and Al Williams

PARKE-DAVIS
Morris Plains, NJ
Booth 40

Parke-Davis representatives invite you to visit them in Booth 40 where they will be happy to discuss a full line of pharmaceutical products with you.

Representatives: Not available at press time

CHESTNUT RIDGE HOSPITAL
Morgantown, WV
Booth 41

Chestnut Ridge Hospital is located on the campus of the West Virginia University Medical Center. The 70-bed private hospital offers inpatient and outpatient psychiatric and chemical dependency treatment for children, adolescents and adults. Information will be available concerning Chestnut Ridge programs and services including eating disorders, chronic pain rehabilitation and neuropsychiatry.

Representative: William Shires

MCDONOUGH CAPERTON ASSOCIATION GROUP
Charleston, WV
Booth 42

Insurance products (life, major medical, disability, accidental death and dismemberment and professional office overhead) will be featured in Booth 42.

Representatives: Not available at press time

FOSTER MEDICAL CORPORATION
Charleston, WV
Booth 43

Please stop by and visit with representatives at Booth 43. Foster Medical Corporation will feature home ventilator equipment, product and reimbursement information and product literature.

Representatives: Dave Cummons, Patti Todd Dillon, Denise Brink, Sam May, Tom Bailey and Paul Babinski

Q-MED, INC.
Clark,NJ
Booth 44

Q-Med, Inc. invites you to visit Booth 44 where representatives will discuss their fully automated ambulatory ECG monitors.

Representative: Betsy Mitchell

WALLACE LABORATORIES
Cranbury, NJ
Booth 45

Representatives in Booth 45, Wallace Laboratories, cordially invite you to visit their booth where they will be pleased to furnish information and/or answer questions on Wallace ethical products.

Representatives: Jim Tippie and Greta Pensel

PROVIDER OFFICE SERVICES AND TELECOMMUNICATIONS, INC.
Wheeling, WV
Booth 46

POST+, Inc. will occupy Booth 46 and invite you to stop by. Representatives will be happy to discuss their Physician Practice Management Software and their PS/2 Model 30 PC Computer System.

Representatives: Becky Brooks and Nancy Lofton

WVU SCHOOL OF MEDICINE
Morgantown, WV
Booth 47

Videotapes and publications concerning the WVU School of Medicine will be featured at Booth 47. Representatives cordially invite you to stop by and visit with them.

Representatives: Patricia Penn and Kendra Rookstool

THE UPJOHN COMPANY
Cincinnati, OH
Booth 48

Representatives of The Upjohn Company cordially invite you to stop by and visit Booth 48 and discuss with them their featured products, XANAX,® HALCION,® MICRONASE,® MOTRIN,® CLEOCIN,® COLESTID,® and HEALTHSCOPE.™

Representatives: George A. McClain

C. V. MOSBY COMPANY
Pittsburgh, PA
Booth 49

C. V. Mosby Company representatives invite you to stop by and discuss a wide variety of medical books from their company.

Representative: Quentin Miller

ROSS LABORATORIES
Columbus, OH
Booth 50

Representatives cordially invite you to stop by and visit Booth 50. Ross Laboratories will be featuring a complete line of pediatric nutritionals for the growing infant during the first year.

Representatives: Gary Walls and Joe Shay

CHARLESTON AREA MEDICAL CENTER
Charleston, WV
Booth 51

Representatives invite you to stop by Booth 51 where the Charleston Area Medical Center will have information on Renal Transplantation, Lithotriptor and other CAMC-related material.

Representatives: Paul Ostasiewski, Melissa Long, Deborah Stevens and Teresa Wagenknecht

MILES INC., DIAGNOSTICS DIVISION
Elkhart, IN
Booth 52

Seralyzer III, Glucometer II and Clinitek 10 will be exhibited in Booth 52. Representatives invite you to stop by and discuss their featured products.

Representatives: Joe Dawson and Ralph Palermo

A. H. ROBINS COMPANY
Richmond, VA
Booth 53

You are cordially invited to visit the A. H. Robins exhibit and meet representatives who will welcome the opportunity to discuss their featured products: Tenex, Micro-K and Reglan.

Representative: Bruce Bailey and Jim Jackson

Scientific Exhibits

AMERICAN RED CROSS
TRI-STATE REGIONAL BLOOD SERVICE

The award-winning videotape "If You Need Blood — The Red Cross Answers Your Questions," produced by Tri-State Region Blood Services, will be shown. Information concerning American Red Cross products and services, including processed human bone, will also be available.

Representatives: Lynn Alexander and Mabel M. Stevenson, MD

WEST VIRGINIA MEDICAL INSTITUTE, INC.

"PRO Contract Update" — West Virginia Medical Institute will present modifications to the PRO Contract mandated by HCFA regarding Ambulatory Surgery Review, Preadmission/Preprocedure Review, Quality Review and HCFA Generic Quality Screens. A working computer terminal will be available for confidential on-line data inquiries for individual provider/practitioner profiles focusing on utilization, quality and DRG problems. Informal discussions will be held on the impact of quality review and the new severity levels. Requests for information as well as comments and criticism will be appreciated.

Representatives: Louise Nelson, Kathleen Merrill, Mikki Payne, Stephen West-Fisher, Nadine Cogar, Betty C. Kirkwood and Harry S. Weeks, Jr., MD

WEST VIRIGNIA SAFETY BELT COALITION

You are cordially invited to visit the West Virginia Safety Belt Coalition booth. "Buckle Up West Virginia" information will be available.

Representative: Danny Woofter

MEDICAL ALUMNI RELATIONS
MEDICAL COLLEGE OF VIRGINIA
VIRGINIA COMMONWEALTH UNIVERSITY

Representatives invite you to stop by the Medical Alumni Relations Booth and help celebrate the School of Medicine's 150th Anniversary.

Representative: Cynthia Heldberg

DEPARTMENT OF FAMILY AND COMMUNITY HEALTH
MARSHALL UNIVERSITY SCHOOL OF MEDICINE

The Department of Family and Community Health at Marshall University School of Medicine invites you to stop by and visit with representatives. Material related to the Department will be featured along with information on the Combined Residency/Practice Program, the Sports Medicine Fellowship Program and MedFit.

Representatives: Chris McGuffin and Robert B. Walker, MD

WV AMERICAN COLLEGE
OF INTERNATIONAL PHYSICIANS

The exhibit highlights the WV American College of International Physicians which was founded in Charleston in 1984. It is an organization of foreign medical graduates in the state. The chapter is part of a national medical organization recognized by the American Medical Association. Since then, it has been involved in the health screenings and continuing medical education programs besides helping with flood relief donation. Recently, it became the first ACIP Chapter to organize a Medical Mission abroad (Philippines). The WV ACIP is part of organized medicine and contributes to the cause of humanitarian concern and medical education.

Representatives: Rano S. Bofill, MD, and Carlos Lucero, MD

(Reprinted with permission from *Check-Up,* May, 1988, Rhode Island Medical Society.)

Medicare update: "Medically unnecessary" services

The model agreement below may help doctors and patients preserve a measure of freedom in deciding together what is in the patient's best interest. Medicare may now determine that any non-assigned service was unnecessary, deny payment, and require the physician to refund to the patient any amount the patient may have paid for the service. This kind of situation can be avoided, however, through a prior written agreement between the doctor and the patient.

Agreement to pay for Medicare services

Patient's name: _____

Physician's name: _____, MD

Date of service: Procedure code/Description: Charge:

_____

_____

_____

Medicare non-participating physicians have recently been advised by the Health Care Financing Administration (HCFA) that services provided to Medicare beneficiaries which are determined **by HCFA** to be "medically unnecessary" will not be paid for by Medicare. In addition, the physician may not collect for those services from the patient unless an agreement is entered into before the services are provided, advising the patient that Medicare will not pay for services determined by Medicare to be "unnecessary."

HCFA has also issued regulations requiring physicians to refund to Medicare patients any amounts collected for services that are determined by Medicare to be "unnecessary," unless there is an agreement to the contrary.

The physician named above believes that the services designated are necessary for the care of the patient named above. In light of the new rulings from HCFA, the physician requests that the patient authorize performance of these services and agree to pay for the services even if Medicare later determines them to be medically unnecessary.

I ask the doctor named above to provide the services indicated above. I agree to pay the doctor for these services even though Medicare may later determine that the services are not necessary.

_____
Patient's signature

_____
Date

Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Center Creates $6 Per $1 of Funding

WVU's Health Sciences Center has been generating at least six dollars for every dollar in state appropriations, reports WVU Vice President for Health Sciences John E. Jones, M.D.

Doctor Jones based his analysis on a new study of the Health Sciences Center's financial impact and on a summary of ongoing construction at the center.

"The WVU Health Sciences Center is a major life force in the economy of the state," Doctor Jones said. "In a year when state appropriations to us were $35.6 million, we were generating about $300 million, including $34 million in unpaid medical care provided by our hospitals and clinics.

Funding Becomes Investment

"These figures make it clear that state funding for the Health Sciences Center is not really a cost, but an investment that pays an extraordinary return to the state of West Virginia."

Doctor Jones added that the School of Medicine supports two thirds of its operating expenses through the research and clinical activities of faculty members.

The financial impact study, conducted for the center by WVU's Bureau of Business Research, found that the center accounted for $117 million of West Virginia business volume in fiscal year 1987. The $117 million included direct and indirect effects on income created by expenditures by the Health Sciences center (HCS) and its personnel, students, patients and visitors.

The Bureau of Business Research reported that more than 6,800 jobs were attributable to the operation of the center.

"A significant indirect effect of the HSC's operations, in addition to the $117 million of business volume, was the expansion of the state's financial credit base by $39 million as a result of funds deposited by HSC personnel and students," said Tom S. Witt, Director of the Bureau of Business Research. "This $39 million can be used by financial institutions to make loans to households and businesses within the state."

In addition, operation of the HSC resulted in $7 million in revenue to state and local government.

Construction projects under way in 1987 accounted for still more HSC-generated revenues. Both Ruby Memorial Hospital and Chestnut Ridge Hospital were under construction, and major funding for construction of the Mary Babb Cancer Center was secured.

"Ruby Memorial Hospital and Chestnut Ridge Hospital have been built entirely with private money, but their construction and operation benefit the state by creating jobs and in many other ways," Doctor Jones said.

Construction costs for the three facilities total approximately $110 million. Only about $2 million of this amount came from the state, as a part of the funding for the $15 million cancer center.

What'll Inherit Earth?—Spiders!

Sunburn, heat exhaustion, and bee stings are not the only hazards of summer. A WVU physician says some spider bites are just as dangerous.

"Someone once said that if our planet was ever annihilated by nuclear war, ants would inherit the earth. Not me. I'm betting on the spiders," said Stephen Rector, M.D., Director of the WVU Hospitals Emergency Department.

"Spiders are common to every terrain in the United States. More than two million can live in a single, grassy field," Doctor Rector said.

Of the 100,000 species of spiders, 20,000 are venomous. The two significant venomous North American spiders are the widow and brown recluse.

Since widows inhabit protective areas close to the ground such as stone walls and trash piles, many people working outside inadvertently disturb their home.

"Most widow bites are felt, but it's not a dramatic event," Doctor Rector said. "Individuals who notice the bite may not experience its effects for 15 minutes to two hours."

Effects vary depending on which part of the body the widow spider attacks, Doctor rector explained. Bites on the upper body can produce intense chest pain, whereas bites on the lower body often cause severe abdominal pain. Other effects include dizziness, anxiety, profuse sweating, and elevated temperature.

"Diagnosing a widow bite is challenging because most physicians don't suspect it. Once stomach rigidity sets in, the bite's effects are sometimes mistaken for appendicitis, a perforated ulcer, or tetanus," Doctor rector said.

How should one treat a widow bite?

"The first thing to do is put ice on the bite area to control swelling. Next, the person should be brought to an emergency facility. It is extremely helpful to bring in the spider so physicians can identify the toxin and act quickly," Doctor Rector said.

Recluse More Troublesome

The brown recluse spider, a close relative of the widow, can be more troublesome, Doctor Rector said. Unlike the widow, brown spiders are not averse to the indoors.

"The venom is extremely toxic, so do not ice the bite area. This will localize the poison. Unfortunately, treatment is limited to supportive care because we do not have an antidote. Physicians must simply respond to the patient's ill effects . . ."

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MU School Of Medicine News

MARSHALL UNIVERSITY

Attack on State Heart Disease Rate Sparked by NHI Grant

To help attack West Virginia's heart disease rate, the highest in the nation, School of Medicine doctors have won a half-million-dollar grant to tackle the problem through education, Dean Lester R. Bryant, M.D., has announced.

The five-year, $522,000 grant is one of four highly competitive Preventive Cardiology Academic Awards given this year by the National Heart, Lung and Blood Institute, part of the National Institutes of Health.

"The NIH indicated to us that this was one of the most outstanding proposals it received for this program," Doctor Bryant said.

"This is a highly sought-after grant," he added. "Seventeen medical schools had applied for it this year, and we were one of only four to receive it. The other three are Yale, Louisiana State University, and the State University of New York at Stony Brook, which means we're in extremely good company."

Other Departments Participating

Doctor Bryant said the Marshall program helps break new ground by focusing the resources of several medical school departments, as well as other departments within the university, on reducing heart disease.

The program's strategy is a long-term one, geared to stopping heart disease before it starts, say the MU program directors, cardiologist Robert Touchon and psychologist Marie Veitia.

"You don't stop heart disease with heart transplants or open-heart surgery," said Doctor Touchon. "You have to start with the 13-year-old who's inherited a gene for high cholesterol, the teen-ager who learned to smoke cigarettes in junior high school, the young person whose idea of a good breakfast is biscuits with sausage gravy. You have to start changing behavior patterns early."

The federal program is designed to enlarge greatly the army battling heart disease by giving medical students intense education in preventive cardiology. Marshall's program will do that and more, said Doctor Touchon.

"We want to cause a turnaround in West Virginia's high death rate from heart disease," he said. "You simply couldn't find a better place to prove that heart disease can be prevented by lifestyle changes such as keeping proper weight and cholesterol levels, staying away from cigarettes, getting regular exercise and so forth.

Educational Videotapes

"We're going to keep taking that message to the person on the street, but we're also going to help the doctors of today and the doctors of tomorrow learn the latest and most effective ways of helping their patients meet those goals," he said.

"One aspect of the program we're particularly excited about is producing a series of educational videotapes which can be borrowed by doctors all over the state as well as being used by our students," he said.

The program will increase substantially the emphasis on preventive cardiology in the curriculum, both in the classroom and through opportunities to work in a risk-factor screening clinic and a risk-reduction clinic.

"Since so many risk factors for heart disease relate to lifestyle and behavior, the psychology aspect is very important to the program." said Doctor Veitia, a medical psychologist in Marshall's Department of Psychiatry.

"We hope to catch students early—during orientation, on day one—and emphasize to them that prevention is an important aspect of medicine," she said. "In our curriculum, we want to give them the knowledge and skills to back that up.

"We want students to believe that prevention is important and to know how to apply the appropriate knowledge," she said.

Unusual Concept

Marshall's multi-disciplinary approach to reducing heart disease is unusual, Doctor Touchon said, but even more unusual is the concept of teaching based on students' own risk of heart disease. New students will undergo a comprehensive heart health evaluation through Marshall's Medfit program. The collective results will be used as teaching tools for epidemiology, behavior modification, and other curriculum areas.

Compiled from material furnished by the Office of University Relations, Marshall University.

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Unfortunately, an older person's response to medicines is less predictable than a younger person's. They can experience altered drug actions and adverse drug reactions.

So, if they don't tell you first, ask them what they're taking and if the medicines are causing any problems. Take a complete medications history including both prescription *and* non-prescription medicines.

Make it a point to tell them what they need to know — the medicine's name, how and when to take it, precautions, and possible side effects. Give them written or printed information they can take home, and encourage them to write down what you tell them.

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WESPAC Members

Listed below are additional 1988 WESPAC members reported to the *Journal* since the listing published in the July issue. New WESPAC members will be reported next month.

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Finally, some people might wonder whether safety belts themselves cause injuries. Belted occupants in collisions have been known to suffer bruises along the lines where the safety belts cross over the body. Yet such injuries seem minor, and even preferable, when you compare them to the major injuries you could suffer from colliding with the dashboard, windshield, steering wheel, or another passenger.

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Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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2 Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency

3 Pharmacokinetic studies in patients with hepatorenal syndrome have not been done Part of the dose of nizatidine is metabolized in the liver In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects

Laboratory Tests—False-positive tests for urobilinogen with Multistix* may occur during therapy with nizatidine

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and wartarin Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b i d , was administered concurrently

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus There are, however, no adequate and well-controlled studies in pregnant women It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats Pups reared by treated lactating rats had depressed growth rates Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers

Pediatric Use—Safety and effectiveness in children have not been established

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups Age alone may not be an important factor in the disposition of nizatidine Elderly patients may have reduced renal function

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0 2%), urticaria (0 5% vs <0 01%), and somnolence (2 4% vs 1 3%) were significantly more common in the nizatidine group A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients All abnormalities were reversible after discontinuation of Axid

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo Rare reports of gynecomastia occurred

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients Rash and exfoliative dermatitis were also reported

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively PV 2091 AMP [041288]

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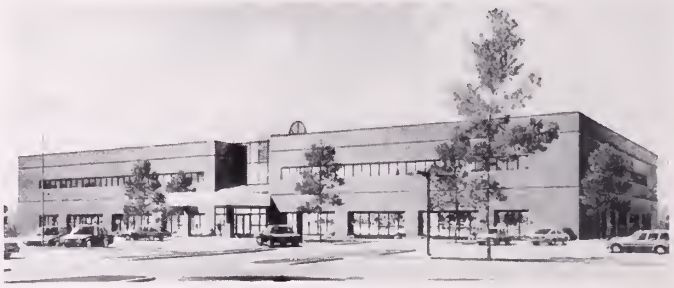

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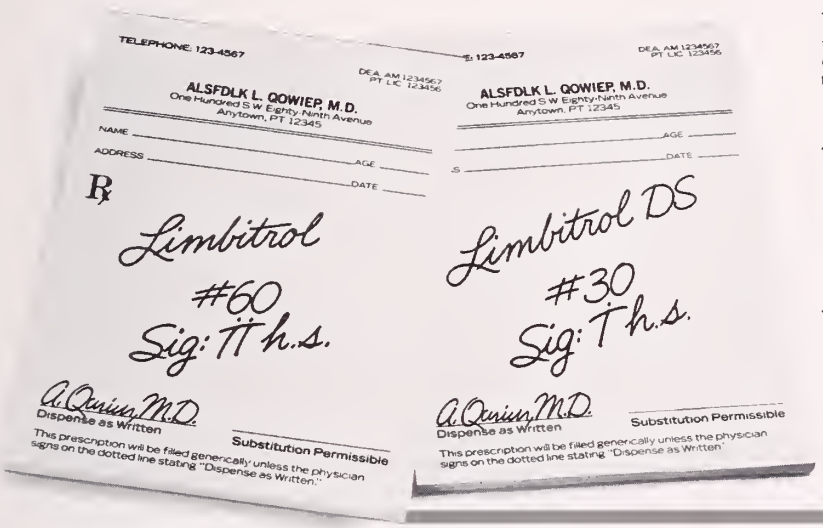

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Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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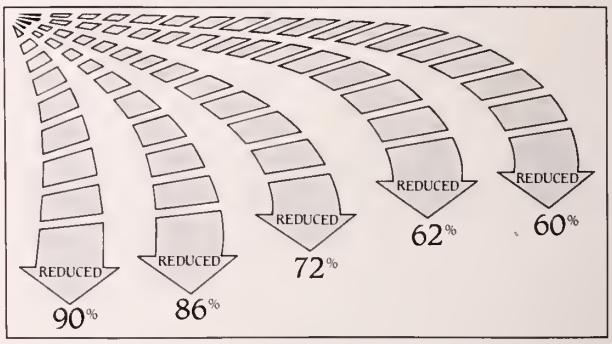

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September 1988 West Virginia State Medical Association Volume 84 No. 9

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ARMY RESERVE MEDICAL PROFILE NO.3

DALE L. TIPTON, M.D.

Associate Clinical Professor, Department of Otolaryngology, Head and Neck Surgery, University of California School of Medicine, San Francisco, California.
Chairman, Division of Otolaryngology, Franklin Hospital, San Francisco, California.
Lieutenant Colonel, U.S. Army Reserve.

EDUCATION University of California at Berkeley, A.B. Physiology; University of California School of Medicine, San Francisco, M.D. and Master of Science, Pharmacology.

RESIDENCY University of California School of Medicine, San Francisco: General Surgery—2 years; Otolaryngology—3 years.

FELLOWSHIPS National Institute of Health Fellow; Cancer Research Institute, University of California, San Francisco.

OUTSTANDING ACHIEVEMENTS Freshman Medical Student Research Award; Class President—2nd year medical school; Student Body President—senior year medical school; Special Award by National Institute of Health to attend and present paper at International Congress of Otolaryngology in Tokyo, Japan; Chairman, Department of Otolaryngology, San Francisco General Hospital 1970-76; Chief of Medical Staff, Franklin Hospital 1982-84.

Dr. Tipton and residents examining post-operative patient in recovery room.

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nizatidine capsules

Brief Summary. Consult the package insert for prescribing information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg h.s. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions—No interactions have been observed between Axid and theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H_2-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD_{50} values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

PV 2091 AMP [041288]

Axid® (nizatidine, Lilly)

Eli Lilly and Company
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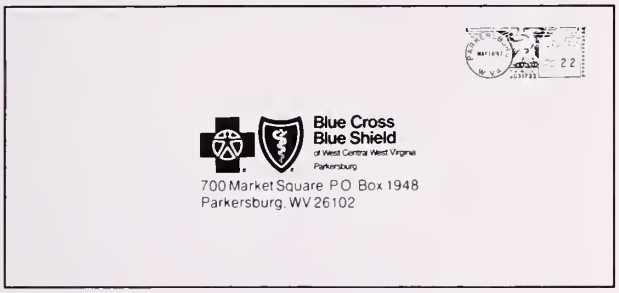

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For otitis media

Illustration of Bactrim power in middle ear infection.

Bactrim Power

- Penetrates
- Concentrates
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Bactrim concentrates in hard-to-reach infections[1] to overpower susceptible strains of *H. influenzae* and *S. pneumoniae (in vitro)*[2] year after year. B.i.d. dosing, cherry flavor and economy keep successful therapy within your power. Especially when you remember to protect your prescribing decision by specifying D.A.W.

In vitro results may not correlate with clinical results. Not indicated for prophylactic or prolonged use in otitis media and contraindicated in infants under two months of age.

Specify *"Dispense as written"*

Bactrim™ Pediatric

(40 mg trimethoprim and 200 mg sulfamethoxazole per 5 mL)

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Please see references and summary of product information on following page.

ROCHE®

Specify "Dispense as Written," "Do Not Substitute," or "Brand Necessary" according to your state regulations.

References: 1. Klimek JJ, *et al. J Pediatr 96*:1087-1089, 1980 2. 8AC-OATA Medical Information Systems, Inc., Volume I, 1986.

Bactrim™

(trimethoprim and sulfamethoxazole/Roche)

Before prescribing, please consult complete product information, a summary of which follows

CONTRAINOICATIONS: Hypersensitivity to trimethoprim or sulfonamides, documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period, infants less than two months of age

WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.

BACTRIM SHOULO 8E OISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, arthralgia, cough, shortness of breath, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently

8ACTRIM SHOULO NOT 8E USEO IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A ß-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with 8actrim than with penicillin.

PRECAUTIONS: *General.* Give with caution to patients with impaired renal or hepatic function, possible folate deficiency (e.g., elderly, chronic alcoholics, patients on anticonvulsants, with malabsorption syndrome, or in malnutrition states) and severe allergies or bronchial asthma. In glucose-6-phosphate dehydrogenase deficient individuals, hemolysis may occur, frequently dose-related

Use in the Elderly. May be increased risk of severe adverse reactions in elderly, particularly with complicating conditions, e.g., impaired kidney and/or liver function, concomitant use of other drugs. Severe skin reactions, generalized bone marrow suppression (see WARNINGS and ADVERSE REACTIONS) or a specific decrease in platelets (with or without purpura) are most frequently reported severe adverse reactions in elderly. In those concurrently receiving certain diuretics, primarily thiazides, increased incidence of thrombocytopenia with purpura reported. Make appropriate dosage adjustments for patients with impaired kidney function (see OOSAGE ANO ADMINISTRATION).

Use in the Treatment of Pneumocystis Carinii Pneumonia in Patients with Acquired Immunodeficiency Syndrome (AIDS). AIOS patients may not tolerate or respond to 8actrim in same manner as non-AIDS patients. Incidence of side effects, particularly rash, fever, leukopenia, elevated aminotransferase (transaminase) values, with Bactrim in AIDS patients treated for *Pneumocystis carinii* pneumonia reported to be greatly increased compared with incidence normally associated with 8actrim in non-AIOS patients.

Information for Patients. Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.

Laboratory Tests. Perform complete blood counts frequently, if a significant reduction in the count of any formed blood element is noted, discontinue 8actrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, parficularly for patients with impaired renal function.

Drug Interactions. In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep fhis in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methofrexate concentrations

Drug/Laboratory Test Interactions. 8actrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (C8PA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffe alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values

Carcinogenesis, Mutagenesis, Impairment of Fertility. Carcinogenesis. Long-term studies in animals to evaluate carcinogenic potential not conducted with 8actrim. *Mutagenesis.* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with 8actrim. Observations of leukocytes obtained from patients treated with 8actrim revealed no chromosomal abnormalities. *Impairment of Fertility.* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole

Pregnancy. Teratogenic Effects. Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects. See CONTRAINDICATIONS section

Nursing Mothers. See CONTRAINOICATIONS section

Pediatric Use. Not recommended for infants under two months (see INOICATIONS and CONTRAINOICATIONS sections)

ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIOES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUOING STEVENS-JOHNSON SYNOROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION)**

Hematologic: Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactrons:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, 8UN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the fhiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Ouresis and hypoglycemia have occurred rarely in patients receiving sultonamides. *Respiratory:* Pulmonary infiltrates. *Musculoskeleral:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia

DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.

URINARY TRACT INFECTIONS ANO SHIGELLOSIS IN ADULTS ANO CHILOREN, AND ACUTE OTITIS MEOIA IN CHILDREN. *Usual adult dosage* for urinary tract infections is one OS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sultamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired.* Creatinine clearance above 30 ml/min, give usual dosage, 15-30 ml/min, give one-half the usual regimen, below 15 ml/min, use not recommended

ACUTE EXACERBATIONS OF CHRONIC 8RONCHITIS IN AOULTS: Usual adult dosage is one OS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.

PNEUMOCYSTIS CARINII PNEUMONIA. Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table

HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and B00 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Oose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint)

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YOCON®

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

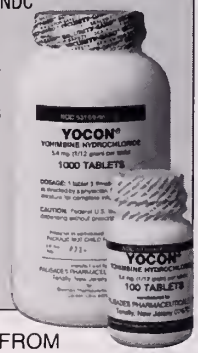
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

Rev. 1/85



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Prenatal Diagnosis of Congenital Mesoblastic Nephroma In Association With Polyhydramnios

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Because of the advancing technology of ultrasound and with the improvement of image quality, early detection of fetal anomalies has been possible. Congenital mesoblastic nephroma, the most common renal neoplasm in the neonate, has been discovered prenatally using ultrasound in several cases in the past, particularly in association with polyhydramnios. Because of this common association, standard examination of the fetus in the setting of polyhydramnios must include evaluation of the kidneys. The purpose of this paper is to increase physician awareness of the association of congenital mesoblastic nephroma and polyhydramnios so that appropriate prenatal, perinatal, and postnatal care can be undertaken.

Case Report

A-22-year-old, healthy primagravida was referred for ultrasonographic evaluation for clinically suspected polyhydramnios. The ultrasound was performed at approximately 28-30 weeks' gestation. Polyhydramnios was noted (Figure 1). Closer inspection of the fetus showed a solid right flank mass in the renal bed (Figure 2). No nornal right kidney was identified. A normal left kidney was identified (Figure 3). The tumor was felt to be of renal origin, and a prenatal diagnosis of congenital mesoblastic nephroma was made.

Subsequently, the pregnancy was complicated by premature rupture of membranes associated with late cardiac decelerations. Delivery was by cesarean section at approximately 33 weeks' gestation. The birth weight was 2050 gms. APGAR scores were six and seven at one and five minutes, respectively. Physical examination revealed a large, right abdominal mass. Abdominal films were obtained as was an abdominal ultrasound, which again demonstrated a well-circumscribed echogenic mass in the right renal fossa.

The neonatal period was complicated by mild respiratory distress syndrome which required temporary endotracheal intubation. The respiratory distress resolved in approximately five days, and at this time the patient was taken to the operating room. At surgery, a large, solid mass contained within the right renal fossa was identified. This was dissected free and removed along with the right ureter.

Macroscopic examination of the specimen showed an 83-gram mass measuring 6.5x4.1x5.0 cm. in size. On cut section, the mass consisted of whorls of firm yellow tissue surrounded by a rim of normal-appearing renal tissue most prominent in the region of the renal

Figure 2. Large right flank echogenic mass in the renal fossa. No normal right kidney was identified.

Figure 1. Polyhydramnios confirmed ultrasonographically.

Figure 3. A normal left kidney was identified.

hilum (Figure 4). Microscopically, congenital mesoblastic nephroma was confirmed. No significant postoperative complications occurred. The patient was discharged on-postoperative day number 18 in stable condition with normal follow-up examination.

Discussion

Congenital mesoblastic nephroma is the most common renal tumor of the neonate. Although it is rare, its frequent association with polyhydramnios demands complete examination of the renal structures during prenatal ultrasound evaluations. More and more, this tumor is being discovered prenatally, most often in association with polyhydramnios.

Polyhydramnios occurs in approximately one in 1,000 cases. It is seen in association with multiple pregnancy, diabetes mellitus, erythroblastosis fetalis, and toxemia. Fetal abnormalities such as gastrointestinal tract and neural tube anomalies are associated with approximately 25 per cent of cases of polyhydramnios (1). Conversely, renal anomalies usually result in oligohydramnios. The reason for the polyhydramnios associated with congenital mesoblastic nephroma is not known, although several theories have been postulated—the size of the renal mass may cause significant extrinsic compression of the gastrointestinal tract resulting in bowel obstruction with vomiting, or

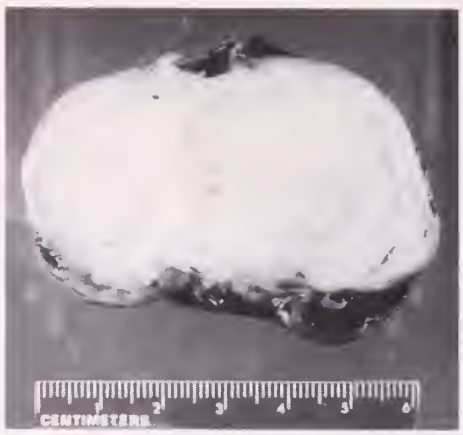

Figure 4. Cut section of the right renal mass demonstrates whorls of firm yellow tissue surrounded by a rim of normal-appearing renal tissue, particularly in the region of the hilum.

there may be polyuria associated with the renal tumor (2).

Ultrasonographically, the mass is solid with margins that may not be easily delineated and may not involve the entire kidney. At pathology, congenital mesoblastic nephromas are usually large, unencapsulated tumors, in contradistinction to the encapsulated Wilm's tumor. The tumor consists of sheets of whorls of spindle-shaped connective-tissue cells with smooth muscle and cartilage infiltrating the normal renal structures. There can be varying mitotic activity noted with several mitoses per high-power field (2). Usually, surgical resection of the tumor is curative, although isolated instances of recurrence have been demonstrated (3).

Until the late 1960s, congenital mesoblastic nephroma was thought to be a category of Wilm's tumor (3). Today it is known to be a separate, benign, pathologic entity. The differential diagnosis for the sonographic findings of a unilateral solid renal mass found in a neonate must include congenital mesoblastic nephroma as well as Wilm's tumor. Also, adrenal tumors must be excluded.

An increased awareness of the association of congenital mesoblastic nephroma with polyhydramnios should be stressed so that appropriate obstetric management can be rendered. Even though the prognosis for the infant after tumor removal is good, potential problems in the perinatal period such as premature birth and dystocia secondary to the abdominal mass may occur (4).

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Sudden Death in Patients With Colloid Cysts

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Colloid cysts of the third ventricle, although benign lesions, carry with them the risk of sudden death. The authors report two out of five patients with colloid cysts of the third ventricle who suffered acute neurological deterioration and subsequent death. The initial manifestations may be signs of acute, increased intracranial pressure and symptoms of neospecific headaches, emesis, impaired vision, or dementia. A discussion of two young adults with colloid cysts who died suddenly, and a review of similar cases from the literature are included in this study.

Introduction

Colloid cysts of the third ventricle are relatively rare, benign tumors accounting for less than one per cent of all intracranial neoplasms (1,2). Symptoms are nonspecific and include headache, impaired vision, gait abnormalities, disturbed mentation, and even sudden death. Since the advent of computed tomography, colloid cysts are being recognized with increasing frequency (3).

Two out of five patients with colloid cysts of the third ventricle presented with acute neurological deterioration and subsequent death at Charleston Area Medical Center between 1985 and 1988. The proposed mechanism for sudden death has been ventricular obstruction and acute hydrocephalus with brainstem herniation and medullary (respiratory) compromise. However, Ryder, et al. (4) have noted that insufficient hydrocephalus or herniation has been present in many cases, suggesting other mechanisms may be possible.

This report presents two cases of sudden death in two young adults at our institution and reviews similar cases from the literature.

Case 1

A 24-year-old, previously healthy, white male suffered acute onset of severe intermittent headaches for the two weeks prior to admission. On the day of admission he collapsed at home and suffered a cardiorespiratory arrest at which time he was resuscitated by his father and transferred to the emergency room.

On physical examination the patient was intubated and unconscious with blood pressure 80-100 systolic, pulse 96, and no spontaneous respirations. There was no evidence of head trauma or nuchal rigidity. Pupils were fixed and dilated to 6mm. There was no cough, gag, corneal reflex or Doll's eyes. There was no response to noxious stimuli, and the patient was areflexic.

An emergency CT scan showed massive dilatation of the lateral ventricles with a round, hyperdense lesion in the region of the foramen of Monroe (Figure 1). Immediately, the patient underwent bilateral ventriculostomies at which time markedly increased intracranial pressure was noted. Drains to the ventricles were left in place. The patient was transferred to the intensive care unit for hyperventilation and close monitoring. The neurological situation remained unchanged, and following two flat EEGs the patient was declared brain dead two days after admission.

Case 2

An 18-year-old, previously healthy, white female complained of headaches several days prior to admission. The day prior to admission the patient was seen at a rural emergency room and treated with a Darvocet compound and a flu shot for her complaint of headaches.

On the day of admission, the patient continued to have headaches along with new onset of vomiting. That afternoon she was found unconscious, cynaotic and without any spontaneous respirations. Paramedics intubated the patient and cardioverted her twice for ventricular tachycardia. The patient was flown by helicopter to Chareston Area Medical Center where, upon arrival, she remained unresponsive.

On examination the patient had a blood pressure of 110/80, pulse of 140, and no spontaneous respirations. There were no signs of head trauma or nuchal rigidity. Her

Figure 1. CT of the head showing massive dilatation of the lateral ventricles with a round, hyperdense lesion in the region of the foramen of Monroe.

Figure 2. CT of the head showing a mass at the anterior third ventricle with markedly dilated lateral ventricles.

*This paper was written while Doctor Vaziri was a fourth-year medical student, Department of Neurological Medicine, Charleston Area Medical Center, and West Virginia University Health Sciences Center, Charleston Division.

pupils were fixed and dilated. The ER physician noted "no clear-cut papillary edema" although there was a question of hemorrhagic staining of the optic disks. There was no gag, cough, or corneal reflex. She had no reaction to noxious stimuli and was areflexic. CT showed a mass at the anterior third ventricle with markedly dilated lateral ventricles (Figure 2).

A right ventriculostomy was done using a twist drill, and a Richmond screw was inserted. There was tremendous cerebrospinal fluid pressure noted by the neurosurgeon. The patient was continued on hyperventilation, mannitol, and dexamthasone with no neurological changes. The patient had two flat EEGs and was pronounced brain dead four days after admission.

Postmortem examination revealed a 2.3-cm colloid cyst located in the superior aspect of the third ventricle, obstructing the adjacent foramen of Monroe. Cerebellar tonsillar herniation was present. There also was a considerable degree of autolysis of brain tissue, most severe at the level of the cerebellum. The pathologist termed this feature as consistent with "respiratory brain." The adenohypophysis showed diffuse, acute infarction.

Discussion

The precise origin of colloid cysts in unclear. Netsky and Shuangshoti (4) concluded that colloid cysts of the third ventricle are congenital and originate from abnormal folding of the neuroepithelium that makes up the roof of the diencephalon. As such, the presence of neuroepithelium is common to all sites of origin of colloid cysts. As a result, colloid cysts can occur in many locations in the central nervous system but most commonly in the third ventricle. They typically arise in the anterior superior area of the third ventricle immediately posterior to the foramina of Monroe (Figure 3).

Figure 3. Anatomic illustration of the ventricular system with a colloid cyst of the anterior third ventricle blocking the foramina of Monroe.

In this way a colloid cyst can block one or both of the foramina of Monroe. The colloid cysts are located in the roof of the third ventricle and project inferiorly into the third ventricle attached in various dimensions to the tela choroidea. Others are found more posteriorly and block the posterior third ventricle and aqueduct.

Grossly, colloid cysts are usually spherical or ovoid, measuring from one to three centimeters in diameter. Microscopically, colloid cysts are lined with epithelium composed of either cuboidal- or columnar-cell epithelium lying on a thin layer of fibrous connective tissue. The cyst content is an amorphous gelatinous fluid (1,5,6).

"Currently, the most widely accepted definitive therapy is direct surgical exploration."

Colloid cysts of the third ventricle most frequently become symptomatic during the third or fourth decade of life, yet they have been reported in infants as young as two months (7,8). There is no sex predominance (9).

The clinical manifestations in children and adults in any age group are nonspecific. In general, the most common complaints are severe; intermittent headaches, often associated visual impairments, gait disturbances, vomiting with or without nausea, and impaired mentation. Other rare symptoms include seizures, incontinence and acute deterioration.

The clinical syndrome of our cases follows closely what has been previously described by Kelly (7) and other authors. Kelly described three forms of presentation: 1. a syndrome of increased intracranial pressure without specific features or localizing signs. Headaches are usually present, often with sudden onset and intensity simulating the picture of a subarachnoid hemorrhage. 2. a progressive or fluctuating dementia with or without signs of increased intracranial pressure, and (3) paroxysmal attacks of headaches which are associated with changing head position. (This phenomenon, however, is the exception rather than the rule.)

The headaches as well as other symptoms have been attributed to intermittent obstruction of CSF at the level of foramen of Monroe due to "ball valve" effect of the tumor. However, this mobility of the lesion is rarely confirmed at surgery.

The diagnosis of colloid cyst is made radiographically by CT and, more recently, MIR (10,11). CT reveals a hyperdense (often isodense), round lesion with mild enhancement with contrast medium. The lesion causes enlargement of the septum pellucidium, collapse of the posterior third ventricle, and dilatation of the lateral ventricles (6). Angiography should be obtained if surgery is planned to exclude a vascular lesion and to outline the venous drainage pattern.

Treatment

Although a colloid cyst of the third ventricle is a benign lesion histologically, definitive management to reduce the cyst mass or maintain normal cerebrospinal fluid dynamics is recommended. However, there is controversy as to the most appropriate method of treatment. The three mainstays of treatment currently practiced include Biventricular shunting, sterotaxic aspiration, and direct excision. Biventricular shunting as a definitive treatment may be considered, especially in high-risk surgical patients. It also may be required if both lateral ventricles are individually trapped. Yet, 70 per cent of the patients shunted will be unnecessarily shunt-dependent when the other treatment modes are considered (2). If either sterotaxic aspiration or direct surgery is not done, some type of cerebrospinal fluid diversion as in biventricular shunting may be required because of the incidence of aqueductal

stenosis is 30-40 per cent, which may be the cause of ventricular dilatation in a number of cases (2). CT-assisted stereotaxic aspiration may be accomplished at a small risk and has been considered recently as an option to direct surgical exposure. In fact, Hall and Lunsford (12), in 1987, recommended percutaneous stereotaxic aspiration as the initial treatment of choice for colloid cysts of the third ventricle. If stereotaxic aspiration fails, then craniotomy should be performed. One argument against stereotaxic aspiration is that the tenacious fluid within the cyst is too thick to be aspirated. Also, cysts less than one cm in diameter may be difficult to penetrate and aspirate.

There has been an occasional report of recurrence of a colloid cyst using the similar technique of endoscopic aspiration (13). In addition, authors recommend longer follow-up periods and further clinical experience to ascertain the efficiency of this mode of treatment. On the other hand, Bosch et al. (14) and Jeeves et al. (15) reported two cases followed for seven and 10 years, respectively, without signs of recurrence.

In effect, many authors describe CT-assisted stereotaxic evacuation of colloid cysts as a low-risk, simple, and reproducible technique that avoids the risk of direct surgical exposure.

Currently, the most widely accepted definitive therapy is direct surgical exploration. The two most commonly practiced surgical approaches are the transcallosal and the transcortical techniques. Both of these approaches are effective and safe ways to deal with colloid cyst tumors of the third ventricle. However, the transcallosal route is preferred whenever the ventricles are small. Complications include collapse of ventricular system and damage to fornicles which may lead to severe amnestic deficits (6). Seizures occur in five per cent of patients who undergo a transcortical approach (6). Presently, results of microsurgical removal of colloid cysts are excellent with minimal morbidity and premature cure. However, in the past, surgical mortality was as high as 20 per cent due to such things as an inability to control increased intracranial pressure postoperatively, a missed diagnosis, or an inability to locate the tumor at the time of operation.

Emergency Management

Acute neurological deterioration and sudden death have been widely reported in the literature. To date, 57 cases of sudden deterioration and death have been reported (4, 16). The incidence of sudden death in patients with colloid cysts of the third ventricle has been estimated anywhere from 10 to 20 per cent by various authors.

In a series by Chan and Thompson (16), four of 12 patients had acute neurological deterioration and developed signs of herniation. In two of the four cases, emergency unilateral ventriculostomy and cerebrospinal fluid shunting resulted in dramatic recovery. However, in Kelly's series two patients suffered deterioration that did not yield to ventriculostomy. In our series neither single nor bilateral ventriculostomy altered the clinical course in the two young adults. Kelly suggested that a radical surgical attack on the tumor provides the only safe procedure and that unilateral ventriculostomy is a dangerous alternative. This may apply to colloid cysts that block both foramina of Monroe, but colloid cysts commonly occur in middle and posterior third ventricle in addition to the usual anterior superior position. In the presence of free communication between the lateral ventricles, Chan stated that unilateral ventriculostomy is safe and effective in patients who have suffered acute deterioration. The effect of unilateral ventriculostomy can be assesed immediately after surgery by an improved clinical picture.

"... physicians should be cognizant of the nonspecific presentation of these patients, and follow through on diagnostic studies."

Ryder et al. (4) attempted to identify risk factors that predispose to sudden death in patients with third-ventricle tumors. He found neither the tumor size nor the duration of symptoms prior to collapse is a reliable prognostic indicator. Iatrogenic procedures such as lumbar punctures are unlikely considerations even though lumbar punctures have been thought to have contributed to several deaths. The degree of ventricular dilatation and herniation at death was variable and may only be a late-developing factor in sudden death. Also, the degree of ventricular dilatation as seen on CT was not a prognostic indicator for the risk of sudden death. The possibility of sudden deterioration should not be overlooked in those patients with little or no hydrocephalus on CT, according to Ryder.

Most authors contend that acute ventricular dilatation secondary to foramina of Monroe obstruction is the mechanism of death, yet the degree of ventricular dilatation and herniation was variable in the Ryder study. Ryder contends that the rapidity rather than the amount of ventricular dilatation may be a critical factor representing the very end stage of a more acute dynamic process. A conceivable process is that the colloid cyst, as it enlarges, exerts pressure against surrounding hypothalamic regulatory centers affecting cardiovascular control. In fact, Ryder suggests that reflex irritation of cardiovascular centers in the region of the third ventricle could play a role in sudden death in concert with acute hydrocephalus or pre-existing heart disease.

Emergency management depends on the acuteness of presentation. In the presence of any signs and symptoms of increased intracranial pressure such as papilledema, prompt decrease in the intracranial pressure is vital. It is the belief that with increased intracranial pressure secondary to acute hydrocephalus, then ventricular shunting is the procedure of choice initially. Other means of decreasing intracranial pressure include hyperventilation, mannitol, dexamethasone, and the restriction of fluids. However, complete definitive therapy requires direct surgical exploration.

In summary, a colloid cyst of the third ventricle should be considered in any emergency room patient suffering from the acute onset of severe atypical headaches or other signs and symptoms of increased intracranial pressure. As to the exact mechanism involved in acute neurological deterioration, whether it be due to obstruction or ventricular drainage, as most authors believe, or to pressure-mediated effects on surrounding structures of the third ventricle involved in cardiorespiratory reflex pathways, the complete picture is not clear. In any event, the risk of sudden death in patients with colloid cysts of the third ventricle is real, as evidenced by the acute deterioration and deaths in two previously healthy young adults in this report. In this regard, physicians should be cognizant of the nonspecific presentation of these patients, and follow through on diagnostic studies. As such, diagnosis is accurate with CT or MR imaging studies in which colloid cyst tumors as well as other neoplasams can be ruled out.

Given the possibility of sudden death in otherwise healthy individuals, early, definitive treatment which includes either ventricular shunting, sterotaxic aspiration, or direct surgical excision of colloid cysts prior to acute deterioration is highly recommended.

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Case Report, Treatment Protocol

Approach to the Patient With Severe Rattlesnake Envenomation

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This paper reports a man severely envenomated by an eastern diamondback rattlesnake (crotalus adamanteus), who was pulseless. unconscious, bleeding from every orifice and in whom resuscitative measures were completely successful.

We found no reports in the medical literature detailing the methods by which patients die following snakebite and indicating how to counter these problems. Refractory hypotension and shock with acute blood loss from a venom-induced coagulopathy appears to be the major therapeutic problem.

Emphasis should be placed on rapid infusion of appropriate antivenin and volume replacement with colloid (preferably packed red blood cells). Replacement of clotting factors and fibrinogin with fresh frozen plasma or cryoprecipitate appears to be beneficial.

The pathogenic mechanisms are reviewed with suggestions for their pharmacologic correction summarized in a concise treatment protocol.

Introduction

West Virginia ranks fifth in the country for incidence of poisonous snake bites, with over 200 reported cases each year (1). Although severe envenomation is uncommon, it is estimated that one West Virginia (WV) snake-related death occurs every three or four years (2). Of the two posionous snakes endemic to this area, timber rattlesnake (crotalus horridus) and copperhead

(agkistrodon contortrix), the former is responsible for most of the severe envenomations seen (3). Death from copperhead bite is extremely rare, with only two known copperhead-related deaths in the United States over the past 15 years (4). Since eastern diamondback rattlesnakes (crotalus adamanteus) are often imported from the southeastern United States into West Virginia for religious purposes, severe bites from this species are frequently seen as well.

The spectrum of acute hematologic and neurologic complications due to severe rattlesnake envenomation are well demonstrated in this case report. Although the literature is replete with recommendations for the treatment of mild to moderate envenomation, there are no guidelines outlining the requirements of the patient with severe envenomation. This paper presents a case report of severe envenomation, a review of the literature and a proposed treatment protocol that may assist in the care of such a patient.

Case Report

R. D. is a 50-year-old white male who, while handling a rattlesnake as part of a religious ritual, suffered a bite to the left hand. The patient elected not to seek medical attention until one hour following the envenomation when he developed nausea, vomiting, hematemesis, weakness, near syncope, rigors and feverishness. This was accompanied by increasing pain and swelling of the affected limb.

During transportation via ambulance to an outlying hospital, progressive hypotension was noted. At the time of arrival to the referring emergency department, cardiopulmonary resuscitation (CPR) was in progress due to electromechanical dissociation with an underlying rhythm of sinus tachycardia. With the application of pneumatic antishock garment (PASG) and rapid infusion of two liters lactated ringers the patient was resuscitated. He required four to five minutes of CPR before a pulse could be felt and blood pressure recorded. Arterial blood gasses immediately following intubation revealed a pH of 7.08, PCO-2 of 26 mmHg, and a PO-2 of 120 mmHg. He was placed on a dopamine infusion, given four vials of crotalidae polyvalent antivenin (Wyeth) and transported by helicopter to this center.

On arrival to the intensive care unit, the patient was alert and orientated, but hypotensive with a blood pressure of 80/62 mmHg while receiving 12.5 micrograms/kg/min of dopamine and lactated ringers solution at 200 cc/hr. He was difficult to evaluate (subjectively) as he was already intubated, but he complained of severe left hand pain and dyspnea. He described the snake as a three and one-half-foot-long eastern diamondback rattlesnake which was thought to have been imported from Florida. The patient admitted to previous ingestion of strychnine as part of his religious rituals, but reportedly had not done so over the previous two to three months.

"Unless the snake was imported, all envenomations in West Virginia should be treated with the same antivenin (crotalidae) polyvalent (Wyeth)."

Physical examination revealed a robust, mildly corpulent, white male who was pale and smelled of melena. The skin was cool, mottled and diaphoretic with scattered petechiae noted on the abdomen and chest. He had a trace of blood around the gums and petechiae on the soft palate, with mild epistaxis noted from the right nostril. The neck was supple without lymphadenopathy, and the jugular veins were flat. The lungs had bibasilar crackles with breath sounds equal bilaterally. His heart rate was 120/min and regular with a grade II/VI systolic ejection murmur heard best at the left lower sternal border that radiated upward into the superior anterior precordium. The abdomen was distended and there was mild right upper quadrant tenderness on palpation. Bowel sounds were decreased but present in all four quadrants. There was clubbing of the finger nails with capillary refill slowed to three to four seconds. Fine fasciculations were present in the quadricep muscle groups bilaterally.

The left hand was markedly edematous with two 1.5 x 0.5 cm puncture wounds noted on the thenar eminence. These lesions were 2.8 cm apart with severe ecchymosis and erythema propagating proximally into the wrist. The patient was losing copious amounts of bright red blood from the rectum, NG tube, all I.V. sites, and in the urine. His prothrombin time (PT) and partial thromboplastin time (PTT) were both greater than 150 seconds with a platelet count of 7,000 per mm^3. At the time of entry, the bleeding time was greater than 20 minutes, and fibrin-split products greater than 40 (mg/ml) with fibrinogen levels being undetectable. The hemoglobin and hematocrit were 15 g/dl and 45 per cent, respectively. The white blood cell count was 19.9 x $10^3/mm^3$ with normal differential. Antithrombin III levels were within normal limits at 84 mg/dl (80-120 mg/dl). A comprehensive urine drug screen, including strychnine, was positive only for nicotine. Serum electrolytes and creatinine were normal.

The patient was admitted to the intensive care unit at which time a triple lumen catheter was placed in the left subclavian and colloid resuscitation was begun. Central venous pressure at the time of insertion was three to four cm H20. Approximately six liters of ringers lactate and six units packed red blood cells were required to reverse the patient's hypotension. An additional 17 vials of antivenin were administered (total 21 vials). Also, 60 units of platelets, 20 units cryoprecipitate, and 20 units fresh frozen plasma (FFP) were required over the first 24 hours to slow the bleeding. The administration of cryoprecipitate and FFP was guided by serial coagulation profiles. The fibrinogen level was 232 mg/dl (200-400mg/dl) the following morning.

The day following admisson, the creatine phosphokinase (CPK) total peaked at 3250 mg/dl with 100 per cent falling in the mm subfraction.

At that time, urine was positive for myoglobin. Sodium bicarbonate was added to the intravenous fluids (IVF) to alkalinize the urine prophylactically to a pH of >8. His chest x-rays during the first 24 hours showed bilateral perihilar infiltrates with cephalization of pulmonary vessels, suggesting pulmonary edema. The EKG was normal.

His convalescence was complicated by the development of adult respiratory distress syndrome, leading to his prolonged intensive-care-unit confinment of three months. During that time he required thoracotomy for empyema of the right hemithorax as well as a tracheostomy. At the time of discharge the patient was approaching his baseline respiratory status with dyspnea on exertion precipitated by 50 yards walking.

TABLE 1
Semiquantitative Envenomation Grading Scale

Grade	*Security*	*Description*	*Antivenin Dose (Vials)*
0	None	Minimal pain; edema/erythema	0
I	Minimal	Severe pain; edema/erythema < 2.5-12 cm/12 hours; no systemic manifestations; normal laboratory parameters	2 to 4
II	Moderate	Severe pain; edema/erythema 15 to 30 cm/12 hours; mild systemic manifestations; mildly abnormal laboratory parameters	5 to 9
III	Severe	Severe pain; edema/erythema > 30 cm/12 hours; severe systemic manifestations; very abnormal laboratory parameters	10 to 15
IV	Very Severe	Multiple envenomations; very severe pain; edema/erythema beyond involved extremity; very severe systemic manifestations; profound abnormal laboratory parameters	>15

Discussion

The spectrum of clinical manifestations following poisonous snakebite ranges from mild local tissue irritation to refractory shock and death. The symptoms, signs and severity of snake venom poisoning depend on the following: 1) the age, size and general health of the victim, 2) the nature, location, depth and number of bites, 3) the amount of venom injected, 4) the species of snake involved, 5) the condition of the fangs and venom glands, 6) the victim's sensitivity to the venom, 7) the pathogens present in the snake's mouth, and 8) the degree and kind of first-aid treatment and subsequent medical care (1).

Because there are so many variables involved in each bite, patients are often graded on a scale of severity using the method described by Parrish and Hayes as shown in Table 1 (5). This scale can be of assistance in following the patient as well as a guide for the dosage of antivenin.

Since 30 per cent to 50 per cent of poisonous snakebites result in little or no envenomation, many patients fall into the category of Grade 0 and require only close observation, tetanus toxoid, serial laboratory studies, wound care and possible antibiotics (6). With the advent of polyvalent crotalidae antivenin in 1954, the majority of patients who are envenomated and treated early do not manifest severe, Grade III or IV signs and symptoms (1). However, in West Virginia, Virginia and Tennessee the popularity of snake handling during church services has resulted in an increased incidence of severe envenomation. This occurs due to the delay in seeking medical attention that is often encouraged by other members of the congregation. Also, hunters of ginseng and game as well as trappers in this area are frequently more symptomatic at the time of entry due to the rural area in which the bite occurred. Any delay in seeking medical attention clearly increases the severity of the bite. In fact, the two known West Virginia snakebite-related deaths in the past six years occurred in a snake handler who was bitten during a church service, and a trapper who was several hours from a tertiary center (2).

Venom Physiology and Toxicology

The toxic components of snake venom can be classified into four broad categories of enzymes, polypeptides, glycoproteins and low-molecular-weight compounds (7). The protein components make up 90 to 95 per cent of the venom and are responsible for the majority of systemic manifestations of the venom (8).

One of the most striking complications following pit viper envenomation is severe bleeding. This is caused, in part, by venom hemorrhagic factor which may act in concert with a venom anticoagulant enzyme (9, 10). These thrombin-like venom arginine ester hydrolases, known as procoagulant esterases, convert fibrinogen to fibrin (10-15). Unlike thrombin, however, these procoagulants do not activate factor XII or factors of the extrinsic clotting cascade. For this reason, the activity is not inhibited by heparin (14, 16-19). The paradoxical clinical effect is a powerful anticoagulant activity that is very similar to DIC with marked elevation of prothrombin time, activated prothrombin time and fibrin split products. Fibrinogen levels are generally low. If active bleeding is present, thrombocytopenia can be marked (14, 20, 21).

In the United States the eastern diamondback rattlesnake produces the most potent hemorrhagic venom although similar responses can be seen in the western diamondback, timber rattlesnakes, copperheads and cotton mouths (10, 15, 22).

The shock that occurs with severe envenomation is multifactorial. The release of vasoactive substances including the potent vasodilator bradykinin may play a role in the immediate drop of blood pressure that is often seen (10,23,24). This increase in bradykinin and its stimulation of parasympathetic centers may also be responsible for the pronounced myosis seen with severe rattlesnake envenomation (22). Carlson et al. observed, in an animal model, intravascular volume depletion following crotalus venom infusion secondary to increased capillary permeability to protein and red blood cells (25). This results in severe swelling, third spacing and subsequent hypotension. The negative inotropic effect and possible mycardial ischemia demonstrated in animal models due to eastern diamondback venom have not yet been confirmed in humans (26). The combination of the aforementioned fluid shifts, release of vasoactive substances, and direct cardiac effects of the venom in concert with exsanguination from a venom-induced coagulopathy may result in severe shock which is refractory to conventional measures.

Unlike envenomation with many of the South American pit vipers, neurotoxicity is seldom a problem following rattlesnake envenomation. Although low concentrations of neurotoxins have been recovered from eastern diamondback venom, neurotoxic effects such as respiratory paralysis are rare (27).

Pathology

The cause of death in the first 18 to 32 hours following envenomation is often exsanguination (28). In 18 of 20 deaths noted by Russell, refractory hypotension and shock with acute blood loss was the major therapeutic problem (1). If the patient survives the acute period, death often occurs as a result of pulmonary complications, sepsis, renal failure, or a combination thereof.

The lung is a major target organ in patients with rattlesnake venom poisoning. Gennaro and Ramsey showed that I 131 labeled crotalid venom injected into mice reaches concentrations in the lungs 10 times that of the liver (29). The venom increases capillary permeability, producing pulmonary congestion with hemolysis and hemorrhages (30). Over 95 per cent of postmortem studies following snakebite show severe pulmonary edema and hemorrhage (1).

Mild, venom-induced nephrotoxicity also is often seen. Renal failure, however, is generally due to acute tubular necrosis from shock rather than as a direct result of the venom toxicity.

TABLE 2

Instructions for Transport and First Aid

1. Move the victim away from the vicinity of the envenomation to avoid multiple bites and immobilize the affected limb.
2. If the snake has been killed, place in a container to accompany patient to the emergency room. (This is to be done only if a solid container is available and the reptile can be transported safely.)
3. If the snake is unharmed, precedence should be given to stabilization and transport of the victim rather than retrieval of the snake.
4. If more than one hour from an emergency facility and envenomation is suspected, then incision followed by suction is recommended. Using a sterile blade, a 1-cm incision is placed over the puncture sites with a depth of 2mm. Continue suction for one hour with a syringe, suction cup, snakebite kit, etc. Since venom toxins and enzymes are denatured by the gastric contents, mouth suction has been accomplished safely in rescuers without lesions of the gums, bucal mucosa, or open areas inside the mouth. Do not make cruciate incisions or incisions on the fingers, face, neck or trunk. If more than 15 minutes have elapsed between the bite and incision/suction, there will be little, if any, benefit.
5. If less than 30 minutes have passed between time of injury and arrival of paramedical professionals, application of a tourniquet 4 cm proximal to the lesion is suggested. If used, the constricting band should be 2.5 to 5.0 cm in width and applied tightly enough to reduce lymphatic and superficial venomous flow. (Appropriate tension can be estimated by placing one finger between the band and the extremity. This should be easily done). Check distal pulse and capillary refill frequently. Do not instruct untrained persons to use a tourniquet!
6. Ice should not be applied to the site.
7. Keep the patient N.P.O. during transport.
8. Remove all rings.
9. If signs of moderate to severe envenomation are present, place two large-bore I.V.s and begin Ringer's Lactate.
10. Place the victim on a monitor and repeat vitals often.
11. Try to keep the patient relaxed and immobilized.
12. Transportation—If signs of severe envenomation are noted, including hypotension, myosis, muscular fasiculations and obvious exsanguination, then transport the patient rapidly to a center stocked with adequate stores of antivenin and an active blood bank.

First Aid

There are many published reports on first aid for snake bite poisoning (31-33). Many of these recommendations, however, are controversial. In fact, most of the previously published first aid protocols are based on common sense and anecdotal experience rather than double blind, prospective trials or proven benefit in animal models. Findlay Russell, the most quoted authority on snakebite, summarized this dilemma in his text: "I can't tell you the best first aid measure, but I can tell you which is the least worse." (1)

With this preface, the recommended pre-hospital measures in Table 2 can be reviewed with some objectivity. Clearly the five most important factors, of proven benefit, are: placing victims at rest, giving them assurance, immobilizing the affected part, close observation, and transportation to a medical facility as quickly as possible (1).

Emphasis should be placed on what not to recommend, thus avoiding harm to the patient or paramedical personnel. These authors advise against retrieval of the snake, unless this can be done safely. In West Virginia, with only two species of venomous snakes, a description of the offending reptile is often adequate and much safer. If the snake is an exotic species that has been imported to WV through a university, pet shop, or church, for example, then identification

becomes more important. Generally, the owner can identify the species in these cases so the proper antivenin can be obtained.

Sushruta, a Hindu physician, recommended the "ayurveda" in 1000 B.C. as a treatment for snakebite (34). Ayurveda is the application of a tourniquet above the area of the bite which, in theory, decreases venom absorption. Two and one half millenia later, this theory is still recommended by many. If a tourniquet is used, the tension of the constricting band, distal pulses and capillary refill must be checked at least every five minutes as noted in Table 2. As the extremity swells, arterial flow can be compromised leading to a needless increase in tissue necrosis and limb jeopardy.

The use of ice to reduce venom absorption is clearly contraindicated. There are multiple reports of ice-induced tissue necrosis with subsequent amputation of the involved extremity (32, 35).

When instructing those in the field, remember that there are some authors who recommend, "If you don't do anything in the way of first aid, you haven't done anything wrong" (1). The recommendations listed in Table 2 can be done safely and may be of some benefit. If there is any uncertainty of the paramedical's or lay person's ability to carry out any of these recommendations safely, they should not be attempted. We do not recommend the use of a tourniquet or suction unless this can be done by an experienced paramedical person or the physician.

Hospital Treatment

The treatment of a severely envenomated patient begins before the victim enters the hospital, with notification of the blood bank to make sure it is adequately staffed, and the pharmacy to assure that adequate antivenin is available. Ideally, patients with severe venom-induced coagulopathy should be transported to centers where blood products are readily available and the pharmacy is stocked with at least 20 vials of antivenin.

Upon arrival the initial evaluation of the patient should include gradation of the bite, as noted previously, and identification of the offending species. Unless the snake

TABLE 3

Severe Envenomation Treatment Protocol

I. Upon notification that an unstable snakebite victim is being transported to your center, the following is suggested prior to entry.
   A. Notification of blood bank to assure it is adequately staffed to type and crossmatch blood products rapidly.
   B. Contact poison control and inform of case for further assistance. In W. Va., call (304) 348-4211 or 1-800-642-3625.
   C. Obtain 20 vials of appropriate antivenin and begin mixing 5 vials for infusion.
   D. Obtain 10 units of cryoprecipitate and mix for infusion.
   E. Arrange for intensive-care-unit bed to be available.

II. Once the patient arrives, initial STAT labs may include:
   A. C.B.C. should be drawn as soon as possible.
   B. Electrolytes (Na, K, Cl, HCO_3, creatinine, glucose, prothrombin time (PT), partial thromboplastin time (PTT), fibrinogen, fibrin split products, bleeding time, urinalysis and amylase.
   C. Chest x-ray, electrocardiogram, and arterial blood gas.
   D. Blood alcohol level and urine drug screen if clinically warranted.
   E. Urine for strychine if the bite occurred as part of a religious ritual.

III. Antivenin Instructions
   A. Obtain the appropriate antivenin. (crotalidae polyvalent antivenin, Wyeth, for all venomous snakes endemic to W. Va.)
   B. Using the skin or conjunctival test, the patient should be checked for hypersensitivity to horse serum (as recommended on the package insert).
      1. If positive in setting of severe envenomation, dilute to 1:1000 and pretreat with 50mg IV diphenhydramine, 250 mg IV hydrocortisone and 300 mg IV cimetidine.
      2. If skin test is negative, may dilute to 1:10.
   C. Appropriate therapeutic agents should be readily available prior to administration including a tourniquet, airway, oxygen, suction, epinephrine and an injectable pressor amine. Constant attendance and observation of the patient for untoward reactions are mandatory when the antivenin is being administered.
   D. In cases of severe envenomation, 20 vials of antivenin should be infused.

IV. Volume Replacement
   A. Ideally, colloid should be used to resuscitate the patient. While awaiting blood products, however, begin Ringers Lactate.
   B. Blood product administration
      1. Packed red blood cells - infuse as rapidly as safely possible until hemodynamically stable and pulse pressure normalizes. (If transfused at greater than 100cc/hr, follow serum calcium closely and monitor the QT interval). Also, blood should be warmed before and during massive transfusions.
      2. Platelets - Infuse until active bleeding stops. Serial platelet counts acutely are of little value.
      3. Cryoprecipitate - If PT and PTT are greater than 150, infuse 10-20 units.
      4. Fresh Frozen Plasma (FFP) - Infuse an initial 10 units, Repeat PT and PTT 2 hours post infusion. If still increased, in setting of active bleeding, repeat above.
   C. Placement of an 8 or 8.5 french introducer into a central vein will allow insertion of a triple lumen catheter for blood product administration or placement of a Swan Ganz catheter.

V. Vasopressors should be used only when hypotension is refractory to adequate volume replacement.

VI. Once the patient is hemodynamically stable, consider the following:
   A. Serial urines for myoglobin. If positive, consider alkalization of the urine.
   B. Give IM tetanus toxoid if needed. (Suggest allowing for correction of the coagulopathy prior to injection only if this can be done within the first 24 hours).
   C. Follow urine output and respiratory status closely. (Theshold for intubation should be low).
   D. Organize a team for adjunctive care.
      1. Orthopedic surgeon. Surgical intervention is rarely needed acutely. Fasciotomy is not indicated and debridement or skin grafting generally should not be performed earlier than 3 days after the bite.
      2. A hematologist may be of assistance in treating the coagulopathy.
      3. A pulmonologist should be consulted if adult respiratory distress syndrome develops.
   E. Treat empirically with broad spectrum antibiotics (e.g. a cephalosporin). If severe tissue destruction is present, consider penicillin and an aminoglycoside.

VII. Serum sickness secondary to horse serum usually occurs 5 to 24 days after administration. Symptoms include malaise, fever, urticaria, lymphadenopathy, edema, arthralgia, nausea and vomiting. Hydrocortisone 100mg IV every 6 hours may be palliative. (Note: This is the only time steroids are indicated in snakebites.

was imported, all envenomations in West Virginia should be treated with the same antivenin (crotalidae) polyvalent (Wyeth). If the bite is from an exotic species, then the West Virginia Poison Center could be of assistance in locating the appropriate antivenin.

Once the antivenin is selected, the infusion should be started as soon as possible. In patients who are unstable, with active bleeding and shock, the focus is often on stabilization of the patient, thus delaying the infusion of antivenin. No circumstances should supersede the administration of antivenin since this is the definitive treatment. To select the appropriate amount of antivenin, see Table 1.

Prior to infusing the antivenin, a skin test, as described on the package insert, is suggested by some authors. It should be noted that skin testing alone to horse serum has resulted in anaphylactic shock and death. A positive skin test, however, does not contraindicate its use. In those patients with positive skin tests and Grade II to IV envenomation, antivenom should be diluted to 1:1000 and infused slowly, preferably in an intensive-care-unit setting. Pre-treatment with intravenous benedryl, hydrocortisone and cimetidine may be of some benefit. Intubation equipment should be at the bedside, and intravenous access from two different sites should be available prior to infusion. Intravenous epinephrine should be readily available in case bronchospasm is precipitated.

There are no specific recommendations available for treatment of the coagulopathy that often develops with rattlesnake bite. Correction of fibrinogenopenia, resulting from consumption and direct fibrinolytic activity of the venom, may be beneficial. Cryoprecipitate is the most readily available source of fibrinogen. (Sixteen bags of cryoprecipitate provide approximately four grams of fibrinogen which should raise the plasma fibrinogen concentration of a normal-sized adult by > 100 mg/dl. Fresh frozen plasma (FFP) can be used as a volume expander as well as a source of fibrinogen and clotting factors. Cryoprecipitate has the advantage of being available immediately after the patient arrives whereas FFP must be matched to the patient's blood type and thawed. The replacement of coagulation factors should be guided by serial fibrinogen PT and PTT levels.

Large quantities of platelets may be required in cases of severe thrombocytopenia. The amount of platelets administered should be dictated by clinical response rather than serial platelets counts. Often, over 100 units of platelets are required to slow the bleeding.

If hypotension does not respond to volume replacement and control of bleeding, intravenous pressor agents such as dopamine may be used. If hypotension is refractory to these measures, consider adrenal apoplexy in the setting of hypotension and coagulopathy.

Once hemodynamically stable, attention can then be shifted towards evaluation of other complications that may occur. Tetanus toxoid should be given, and serial urines for myoglobin should be checked. Renal function and pulmonary function should be followed closely since complications with these systems frequently occur.

Table 3 lists specific recommendations for in-hospital workup and evaluation. Since all cases of severe envenomation are unpredictable, the protocol presented is not meant to be a "cookbook" approach, but rather an outline of the needs that may arise in some patients.

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President's Page

"It appears that the government is deliberately trying to obscure the differences between physicians, nurses, hospitals, and health insurance companies by applying the term 'health care provider' to all of them."

Words, Words, Words . . .

When a bill is introduced into the Legislature, the first part of the draft is the definition of terms that are used in the body of the legislation. Perhaps it would be appropriate to start a new presidential year with a discussion of the euphemistic terms that are of concern to many of us in the medical profession. It appears that the government is deliberately trying to obscure the differences between physicians, nurses, hospitals, and health insurance companies by applying the term "health care provider" to all of them. Physicians and nurses are no longer professionals but are "providers" who, by most definitions, are more subject to regulations.

In the same sense, the term "health care industry" changes health care from a profession to an industry. *Webster's New Universal Dictionary* defines "industry" as a business or trade, and "profession" as an occupation requiring advanced training in the liberal arts and sciences. Industry has been heavily regulated since around the turn of the century when political and financial excesses of monopolies and violence of trade unions were out of control. In contradistinction, professions, especially the learned ones, have been left to self regulation by enforceable sets of ethical guidelines. There are many in government who think we as a profession are out of control, and we would be easier to regulate if we were reduced to an "industry." Perhaps another way to state it is that we are rapidly becoming a public-regulated utility.

I was appalled when I first overheard nursing students refer to patients as "clients." This term is being taught today as preferential to "patients" by our schools of nursing. The dictionary definition of "client" is "one whose interests are represented by any professional man." When this definition is applied to patients, then the term "client" seems to be apropos, for the modern nurse is taught to look at patients from a holistic approach and be an advocate of their psychological, physical and social interests and needs.

I can accept "client" as an alternative to "patient," but I still prefer "health care professionals" to "health care providers," and "medical profession" to "medical industry."

—Bill M. Atkinson, M.D.

Nicotine Addiction?

The recent announcement by Surgeon General Koop that the smoking habit results from addiction to nicotine is certainly controversial. It has long been the contention of this ex-smoking writer that the habit of smoking is just that: a habit. Habituation does not necessarily indicate addiction.

In the case of certain drugs such as heroin, cocaine, etc., habitual use definitely results in the syndrome we call addiction. Prominent among the criteria for the diagnosis of addiction are physical symptoms on withdrawal. The writer maintains that there are no physiological symptoms of withdrawal in the cessation of the smoking habit. Nicotine is an alkaloid. There has yet to be found evidence of a pleasurable effect of nicotine upon the body. Quite to the contrary, physiologic effects of nicotine are generally unpleasant: elevation of blood pressure and pulse, gastrointestinal symptoms such as nausea and pylorospasm, increase in secretion of gastric acid, cardiac arrhythmias, bronchial constriction, and increase in the production of respiratory mucus and saliva.

It is the contention of the writer that smoking a cigaret does not increase one's feeling of well-being, but does exactly the opposite. Most smokers, when responding to the direct question, admit that they not only do not feel better after smoking but have a definite decrease in their feeling of well-being. The popular nicotine chewing gum has been almost a total failure because it does not decrease the smokers' desire to smoke, and any apparent benefit logically may be assigned to placebo effect. This is quite understandable since there is no known pleasurable effect of nicotine, which is a potent toxin with a fatal dose in the adult of about 60 mgms by mouth. If nicotine were pleasurably stimulating, one could imagine that tobacco companies long since would have been adding nicotine to their cigarets to increase their sales. Obviously this has not been done. Nor has anyone established a flourishing market in nicotine pills to satisfy the addict's love of nicotine—especially the addicts who desperately want to quit smoking because of the fear of cancer.

Fortunately the smoke of one cigaret, although it contains six to eight mgms of nicotine, releases but a small amount of the available alkaloid for absorption into the systemic circulation by way of the lungs. It is interesting to note that numerous constituents of tobacco smoke such as hydrocyanic acid, ammonia and the pyridines would likewise be expected to produce not pleasant, but definitely unpleasant, effects. The effect of the coal tars has long since been documented, together with their relation to cancer. Likewise the presence of carbon monoxide in the smoke produces a measurable increase in carboxyhemoglobin, the effect of which can only be increased discomfort.

It is the contention of this writer that *tolerance* to these poisonous and unpleasant effects of inhaling tobacco smoke is the chief factor which allows a smoker to continue the habit without the unpleasantness which accompanied the initial stages of smoking. The habituation is to the act of smoking itself. Cigaret smoking involves the stimulation of many of the senses. The smoker reaches for a pack of cigarets, takes it out, extracts the cigaret from it, puts the pack away, taps the cigaret on his thumbnail, inserts it between his lips, reaches for the lighter, lights the cigaret, sucks on the cigaret, inhales the smoke into his lungs and exhales the smoke, at which point he both smells and sees it. All of this activity and multisensory stimulation eventually produce the habit pattern by which nervous tensions are released. So the habit pattern becomes well-established—but not because of the effects of nicotine or other substances in the smoke—rather in spite of those effects.

The same can be said of chewing or the use of snuff. Initial use produces nausea and feeling of extreme discomfort but continued use results in the development of a tolerance for the toxic effects of tobacco products. Then the habit of taking and using the tobacco in the mouth becomes a habit in itself and not an addiction to the unpleasant effect of nicotine or other constituents.

The last word hasn't been had yet. Meanwhile let's get on with our job of encouraging our patients and friends to stop smoking, without worrying about the questionable assertions of the Surgeon General. The rate of remission from the smoking habit among our own profession would be remarkable indeed, if nicotine addiction were at the root of the habit. However, as this writer sees it, we have merely broken the bad habit, not an addiction which would be expected to have a much less favorable incidence of recidivism.—JNJ

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Our Readers Speak

Environmental Lithium and Major Cardiovascular Disease: Hypothesis Testing of an Issue

Major cardiovascular diseases account for approximately 50 per cent of the mortality in West Virginia; it is higher than the U.S general population rate, with a ratio nearly one and a quarter for WV/U.S. (1). An unresolved issue is the role of environmental lithium in the epidemiology of the major cardiovascular diseases: diseases of the heart, hypertension, cerebrovascular disease, and arteriosclerosis, all among the 10 leading causes of mortality in both West Virginia and the U.S.

Voors reported on evidence of the negative correlation between lithium and ASCVD mortality for the 100 largest cities. Risk factors for ASCVD cited to be antagonistically affected by lithium are hypertension, diabetes mellitus, uric acid metabolism, hypomanic behavior, and serum lipids (2).

Valentine and Chambers studied the drinking water systems of the Houston environment and arrived at different conclusions than Voors. They found a positive, rather than a negative, correlation for ASCVD mortality and lithium and zinc, statistically significant at the 0.05 probability level. Although mentioning Voors findings, the question of their difference was left unresolved (3).

A review of the rates of 15 cities and 55 counties in West Virginia for major cardiovascular diseases in 1984 revealed that Martinsburg, with a spring to supply its water, had a proportionate mortality rate of 0.24 while its county, Berkeley, with a separate spring and wells to draw upon, had a proportionate mortality rate of 0.99 when they were compared to the total major cardiovascular mortality for WV. Beckley had the highest proportionate mortality rate at 1.77. Two other cities, Parkersburg and Vienna, with lateral and drilled wells, had proportionate mortality rates of 1.24 and 0.69, respectively (1, 4).

The lithium content of the water supplies was determined by atomic absorption spectophotometry. The Table shows the results of the determinations, by city or county, of the respective proportionate mortality rates and lithium content of the water supply.

With only five parts of data points, statistical significance of the values derived from their analysis may be speculative. Nevertheless, with the PMR and lithium content as predicted and predictor variables, respectively, a Poisson regression appears to satisfy the distribution of data best. It yields a linear relationship with a negative slope between higher values of PMR as the dependent variable, and higher lithium content as the independent variable. This would support Voors' hypothesis of major cardiovascular diseases: higher lithium levels tend to exert a protective effect from major cardiovascular diseases.

While the above hypothesis provides partial explanation, the difference between cities is also multifactorial, to be found in constitutional, environmental, and behavioral causes, among others. The present hypothesis tested the issue of low versus high lithium levels in drinking water as etiologic in major cardiovascular disease and concluded that with a discrete Poisson regression over the time interval of the year 1984, higher lithium levels tended to protect against major cardiovascular diseases, supporting Voors' data.

Table
Proportionate Mortality

Location	*Rate (PMR)*	*Lithium Content*
Beckley	1.77	0.01 mg/L
Berkeley County	0.99	0.03 mg/L
Martinsburg	0.24	0.03 mg/L
Parkersburg	1.24	0.10 mg/L
Vienna	0.69	0.10 mg/L

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Heart In West Virginia

Please find enclosed a check representing repayment to the State Medical Association for the Medical Scholarship Award granted me during the years 1977 through 1981. With this repayment, I send my sincere thanks to you and your organization for your asssitance during my years as a medical student. Although I am now located in Gainesville, Florida, in the community practice of cardiology, my heart and many of my family members remain in West Virginia.

Please extend my warmest regards to the members of your organization and, if I can be of any assistance to the Medical Association in any way in the future, please feel free to contact me at any time.

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376 Beds, 11 Levels, Rooftop Helipad

WVU Moves Into $87 Million Ruby Memorial

Ruby Memorial, West Virginia University Hospitals' new facility, is open.

In less than three hours July 19, 201 patients were transferred from WVUH's former hospital to Ruby Memorial.

The relocation of patients began at 8 A.M. and ended at 10:50 A.M. Six hours had been set aside for the move, but only half the time was needed.

First Adult Patient

Roy Slavenski, 50, of Morgantown, was the first adult patient through the tunnel connecting Ruby Memorial to the former hospital.

Slavenski was Director of Respiratory Therapy at WVU Hospital from its opening until 1981, a total of 22 years.

This was the first time Slavenski had been in the new facility. He was accompanied through the tunnel by Edmund Flink, M.D.; J. C. (Jake) Huffman, M.D., and registered nurse Debbie Campbell. Doctor Huffman, of Buckhannon, had admitted the first patient to the former WVU Hospital in 1960.

Slavenski was greeted by Hazel Ruby McQuain, who had made an $8 million donation to enhance the hospital construction project. The hospital is named in honor of Mrs. McQuain and her late husband, J. W. Ruby.

"I don't think you can get any better (health care)," Slavenski said, about West Virginia University Hospitals.

First Pediatric Patient

The first pediatric patient was Jordan Oliver Fouch, 11 days old, who underwent revolutionary open heart surgery in his first week of life to correct a congenital heart defect. The left half of his heart was very poorly formed.

Roy Slavenski, Morgantown, was the first patient transported to Ruby Memorial Hospital when West Virginia University Hospitals moved into its new $87 million facility in July. He was greeted by Hazel Ruby McQuain, left. Slavenski was transported by Edmund Flink, M. D., Registered Nurse Debbie Campbell and J. C. (Jake) Huffman, M. D. (partially shown). Doctor Huffman admitted the first patient to the old hospital when it opened in 1960.

Dr. Robert Gustafson, pediatric cardiac surgeon, accompanied Jordan through the tunnnel. Doctor Gustafson performed the surgery on Jordan at WVUH. He is one of only three or four surgeons who perform the surgery.

Jordan was in stable condition and "doing as well as can be expected," said his parents, Larry and Susan Fouch of Logan. The baby was born in Charleston and transferred to WVU Children's Hospital, located on Level 6 of Ruby Memorial.

"We're very optimistic," Mrs. Fouch said. "It is fantastic there are facilities in the state as fine as this one."

The Fouchs were greeted as they came through the tunnel by J. B. McQuain, Hazel Ruby McQuain's husband.

As Ruby Memorial, which consists of 11 levels and a rooftop helipad, filled with patients, enthusiasm spread through the building among hospital staff.

"Today is one of the most exciting days the hospital and its staff will ever experience," said Bernard G. Westfall, WVUH President. Employees "all have big smiles on their faces," he said.

Patient relocation day was three and a half years in the making. Construction of the 376-bed hospital was begun in 1985 and cost $87 million.

"The hospital is ready," he said. "We were not going to move anyone in until we were sure things

As the new Ruby Memorial Hospital in Morgantown filled with patients on relocation day July 19, enthusiasm spread through the building among staff. Construction started in 1985. The structure features the Jon Michael Moore Trauma Center and WVU Children's Hospital, and has 46,000 square feet of shell space for future expansions. It faces the WVU football stadium.

were right." Testing of hospital equipment and safety features was the last step before the hospital could be occupied.

"This hospital, as an inpatient facility, is a leader." Westfall said. "It was built to last for many, many years and is one of the finest in the country. We believe we have a hospital for the future."

The hospital was designed to keep up with changes in health care. As health care changes, the hospital will be modified. The hospital has 46,000 square feet of shell space for future expansions.

Ruby Memorial features the Jon Michael Moore Trauma Center and WVU Children's Hospital.

The first emergency patient arrived at the trauma center shortly after it opened at 8 A.M., complaining of chest pains.

The move to Ruby Memorial actually began June 20, shortly after necessary certification was received from the state fire marshal.

Between June 20 and moving day, various hospital departments, such as clinical labs, moved into the facility. Once the patient move began, there were no delays, and patient relocation day went as scheduled.

Help Patients Quit Smoking: Doctors' Booklets Offered

The importance of quitting smoking is undeniable, but how can you effect this lifestyle change in your patients? Behavioral studies indicate that just three to five minutes of counseling and advice from physicians can be more successful in helping the smoker quit than most self-help material on the market, according to the American Lung Association of West Virginia. If each physician delivered these stop-smoking messages to patients, at least 38 million smokers could be reached each year, the Lung Association added.

The health agency will provide a guide for physicians on this topic. "Clinical Opportunities for Smoking Intervention: A Guide for the Busy Physician" was produced by the American Lung Association, its medical arm, the American Thoracic Society, and the National Heart Lung and Blood Institute. The 30-page, well-illustrated resource publication includes sections on recognizing tobacco dependence, causes for relapse and steps to prevent relapses, nicotine withdrawal, biomedical consequences of smoking, community resources, and others.

To receive your copy (or multiple copies) please send $1/guide (for postage) to:

American Lung Association of West Virginia
Attention: Kathi Elkins
P.O. Box 3980
Charleston, WV 25339-3980
(304) 342-6600

Strengthening the Office Medical Record Through Self-Assessment

Reprinted with permission from "Malpractice Alert," a publication of the Oregon medical Association

The following questionnaire is designed to help you evaluate your charting strengths and weaknesses by conducting a brief self-assessment of your office medical records. Answer the questions based on your impressions of your current office medical recordkeeping practices. Try to be objective, and assign a plus '+' or minus '–' in the appropriate column. Then total your results.

To test your impressions, select a few office records which contain entries made in the last six months. Review them carefully. Answer each of the questions again assigning a plus '+' or minus '–' where applicable and total your results.

When you are done, compare your "impressions" with "reality" and see where your office medical recordkeeping strengths and weaknesses lie. In today's legal climate, a deficiency involving any of the listed items could expose you to liability.

Patient Workup	+	–
Do you chart the reason for the patient's visit, including all complaints?		
Do you chart patient's history, including past medical treatments, current medications, drug allergies, family history, etc?		
Do your patients fill out a questionnaire on their current complaints and previous history?		
If yes, do you document your review and follow-up on the questionnaire?		
Also, do you document your investigation of question marks and blank spaces left on the questionnaire?		
Do you chart all your physical findings?		
Do you chart negative findings?		
Do you diagram size and location of suspicious lumps and lesions?		
If yes, do your patients sign or initial these diagrams?		
Diagnosis		
Do you chart the data used to support your diagnostic impressions?		
Do you review and initial all path, lab and x-ray reports?		
Do you review available previous medical reports and then chart appropriate data?		
Do you chart discussions with other providers that lead to the diagnosis?		
Are all telephone conversations (physician and staff) regarding patient care noted on the chart?		
Are all drug allergies noted prominently on the chart?		
Are all lab/x-ray reports seen and initialled by the physician before placement in the chart?		
Are signed, dated authorizations obtained and placed in the chart before copies of the chart are released?		
Is it noted on the chart where the copy is being sent?		
Is physician authorization required before the records can be released?		
Does your office follow a stated procedure for termination of care?		

Treatment	+	–
Do you outline a treatment plan that is supported by the findings in the workup and diagnosis?		
Do you chart obtaining the patient's informed consent?		
When appropriate, do you chart the patient's informed refusal?		
Do you chart all instructions to the patient, including follow-up requirements?		
Follow-up		
Do you chart who is responsible for follow-up—patient or physician?		
Do you chart recommendations for referral to outside care or follow-up?		
Do you chart discussions with other providers about patient care?		
Do you chart consideration of previous findings in follow-up?		
Do you chart unchanged abnormal findings?		
Do you chart review of subsequent lab/x-ray reports?		
Do you chart patient compliance or non-compliance with recommendations?		
Office Charting Procedures		
Are missed/cancelled appointments (reason included, if known) noted on the chart?		
Charting Habits		
Are chart notes readable?		
Are all chart entries signed and dated?		
Are all no-shows/cancellations noted?		
Are corrections and additions to the chart entered chronologically and dated and signed?		
In your absence, could a colleague using information from the medical chart provide your patients with immediate and appropriate care?		

Poetry Corner

The Drought

One day's heat
Blended into the day following
With no respite,
Except near dawn
When birds with optimistic song
Thought each morn
Would bring them rain.
Wrong, again.

The flowers knew better.
Many days ago the daisies,
Heartiest of the wildest growth,
Had hung their heads
On hump-back stems
And died.

The hot wind baked
The cracking earth,
And brown grass blades
Bristled in anger
At the injustice
Of it all.

Why were we being punished
For the sky's dereliction?
No rain for weeks,
Not even a prediction.
What will become of us,
And when?

And then a rumbling
In the heavens far away.
Was it thunder,
Or the rumbling
Of death's carriage?

After waiting hours
The heavens gave way,
And torrents of water
For one whole day
Put the earth
And all still living
Back in business.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

Part 3: Variety of Medical and Non-Medical Uses

Electronic Information for

WILLIAM A. YASNOFF, M.D., PhD.
American Medical Association

Last time, the capabilities of AMA/NET to assist with diagnostic and therapeutic problems were discussed.

III. Current Awareness of Specific Medical Topics

Physicians often need to obtain the latest information in a particular medical subject area. This may be a particular disease state, subspecialty, or a topic of current interest. Traditional sources for such information are the many available medical news publications, scientific meetings, and current medical literature. However, it is often very difficult to sort through the plethora of available information to find the specific items of interest.

This is another area where electronic information can be helpful. AMA/NET provides a number of services which directly address the need for current medical information. One of the most useful of these is the Associated Press Medical News Service, which provides up-to-the-minute reports of medical news as they are transmitted on the Associated Press newswire. These stories are updated continuously, and are available on both a chronologic basis and by subject area. Medical news stories are thus available almost immediately on AMA/NET.

Another useful source of current information is the literature update by specialty. This provides, via a search of EMPIRES, the most recent literature in a given specialty area. The social and economic aspects of medicine (SEAM) database, which is maintained by the AMA, is another useful source of information. This database references selected articles in both medical and non-medical literature which pertain to social, ethical, and legal issues related to the practice of medicine. Topics of current controversy are often represented in this database.

An additional source of current information in AMA/NET is the public health information services. The Centers for Disease Control, the Surgeon General's office and the FDA all provide current information on AMA/NET. For example, the full text of the weekly Morbidity and Mortality report from the Centers for Disease Control is available.

These sources of information, combined with the literature searching capabilities, make it easy to obtain the latest information on any particular topic of medical interest.

IV. Reference Information

Reference information needed by physicians is traditionally available through a nearby medical library. An example of this type of information on AMA/NET is the CPT procedure codes. The CPT codes are used for reporting most medical procedures to third-party payers. This can be useful when such a code is needed and the printed reference is not available.

V. Continuing Medical Education

Continuing medical education has become increasingly important as the rapid pace of medical discovery leads to proliferation of new knowledge and changes in previous concepts. The traditional methods for obtaining continuing education involve attending meetings, either locally or by traveling to a remote location, or reading material followed by subsequent self-administered examinations. More recently, CME has been available in videotape form.

Electronic information has a role to play in CME, also. In particular, computers are well suited for patient simulation type of exercises where the effects of many different patient management scenarios can be explored safely and easily. AMA/NET provides access to a number of such simulations which have been developed at the Massachusetts General Hospital. Examples of these

Physicians: AMA/NET

include abdominal pain, diabetic ketoacidosis, and hypertensive emergencies. With these programs, access to electronic information can provide new opportunities in continuing medical education.

VI. Communications With Colleagues

Traditionally, physicians' communications with colleagues has consisted of scheduled meetings, either local or remote, chance meetings in the hallway ("curbside consults"), telephone communication (which is very inefficient), and communication by letter, which is frequently used to report the results of patient referrals.

AMA/NET provides access to a new form of electronic communication: electronic mail. With electronic mail, messages are sent immediately, but stored so that individuals send and receive information at their convenience. This greatly simplifies written communication with colleagues, since sender and receiver do not need to be simultaneously available. Thus, electronic mail can provide the speed of the telephone without the associated inconvenience and delay, and represents a cure for chronic telephone tag.

Electronic communications can also take the form of an electronic bulletin board, allowing announcements to be made which are immediately accessible to system users.

VII. Non-Medical Information

Physicians also need information that is not medically related. Obviously, there are a multitude of traditional sources for all types of information via newspapers, magazines, other periodicals, and television. Electronic information provides a supplement to these sources. In particular, AMA/NET provides on-line access to the Official Airline Guide, which is very useful in planning travel, as well as various types of financial information. The latter includes business press releases, financial and commodity news, tax notes, and stock and commodity quotations.

VIII. Conclusions

Electronic access to information provides an important adjunct to traditional methods. In some cases electronic information provides capabilities which are not otherwise available. In the future, new forms of electronic information will be available. One such form is the "interactive reference," which provides reference information tailored to an individual patient's situation. With such a reference, the process of extracting information relative to a specific patient from a number of sources is performed automatically, providing both convenience and time savings.

This report has described some of the information sources and capabilities available on AMA/NET. It is clear that physician access to electronic information greatly expands, but does not replace, traditional information access methods.

New Members

The following physicians and students were welcomed in July as new members of the West Virginia State Medical Association:

Mercer

Frances G. Baird, M.D., Bluefield Pathology Associates, 500 Cherry Street, Bluefield 24701, Pathology

Western

Brit M. Williams, M.D., 205 Virginia Street, Ravenswood 26164, Internal Medicine

Wyoming

Shashikant B. Bhavsar, M.D., Mingo Family Health Center, PO Box 147, Gilbert 25621, General Practice

Residents

Gregory A. Elkins, M.D., 6323 Pine Drive, Huntington 25705

Kurt G. Klussmann, M.D., Stewartstown Road, Bon Vista Apartments #D-11, Morgantown 26505

Debra L. Pederson, M.D., 521 West Virginia Avenue, Morgantown 26505

Hany S. Shenouda, M.D., 6649 Country Club Drive, Huntington 25705

Students

Richard L. Callihan, 729 11th Avenue, Apartment 3, Huntington 25701

John P. Carmody, 742 Oakwood Road, Charleston 25314

"First, the good news . . . you can have all the carrots and celery you want."

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Sept. 3, Cardiology Day*
Sept. 10, Psychiatry*
Sept. 16-17, OB/GYN*
Sept. 17, Oncology*
Oct. 7-8, Diagnostic Ultrasound
Oct. 7-8, Pediatric Oktoberfest
Oct. 14, 9th Annual Ophthalmology Conference: Glaucoma Symposium
Oct. 15, 9th Annual Ophthalmology Conference: Scientific Sessions
Oct. 20-22, 14th Annual Hal Wanger Family Practice Conference*
Oct. 29, Occupational Medicine*
Oct. 29, Pat Tuckwiller Annual Scientific Seminar*
Nov. 4-6, Hypnosis Workshop
Nov. 19, Emergency Medicine*

*In conjunction with WVU football games

CAMC/West Virginia University, Charleston Division

Sept. 14, Hypertension Seminar
Sept. 17, Swallowing Disorders
Oct. 19, Faculty Research Day
Nov. 5, Sleep Disorders
Nov. 12, Trauma Seminar

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown
☐ WVU Medical Center-Charleston Division/CAMC
• CAMC/WVU-Charleston Division
(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Sept. 22, Why Lab Tests Vary, Especially Cholesterol, Bobby Caldwell, M.D.
Oct. 27, Color Flow Doppler, G. G. Thakker, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—Sept. 2, Newer Concepts in CPR.
Sept. 23, Organic Mental Disorders, Robert Keefover, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Sept. 8, Disability Determination, Daniel B. MacCallum, M.D.
Oct. 13, G. I. Update, Warren Point, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Sept. 21, Rashes (Part I of II), William Welton, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Sept. (no program)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Sept 7, Neurologic Exams, Arthur L. Poffenbarger, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Sept. 28, AIDS Update, Elizabeth Funk, M.D.

Kingwood, ★ Preston Memorial Hospital—Sept. (no program)

Logan, • General Hospital, 11:30 A.M.—Sept. (no program)

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Sept. 13, Fertility, Including In Vitro, Sherif G. Awadalla, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Sept. 20, Update on Breast Cancer, Steven Jubelirer, M.D.

Montgomery, • General Hospital, 12 P.M.—Sept. 7, Obstetrical Emergencies (speaker tba)

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Sept. 27, Nutrition, Carolyn Sue Warren, M.D.
Oct. 25, Update Surgical Procedures, John L. Chapman, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Sept. 9, OB Ultrasound (speaker tba)

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Sept. 22, Update on Common Skin Cancers, Steven Milroy, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Sept. 20, Obstetrical Emergencies, Paul Fulcher, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Sept. 6, Newer Cardiac Medications, Harold Selinger, M.D.
Oct. 4, Update Infectious Disease, Elizabeth A. Funk, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Sept. 13, Use of Clot-Dissolving Enzymes After Heart Attack, Abnash Jain, M.D.
Sept. 27, Inflammatory Bowel Disease

Wheeling, ★ Ohio Valley Medical Center, 8 P.M.—Sept. (no program)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Sept. 28, Newer Cardiac Medications, Harold Selinger, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Sept. 20, Management of Coronary Artery Diseases, Stafford G. Warren, M.D.
Oct. 18, Office Evaluation of Sexually Transmitted Diseases, Rashida A. Khakoo, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Sept. 1, Special Considerations in Geriatric Medicine, Shawn Chillag, M.D.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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1. Ann Intern Med 1982;96:766-71.

WESPAC Members

Listed below are additional 1988 WESPAC members reported to the *Journal* since the listing published in the August issue. New WESPAC members will be reported next month.

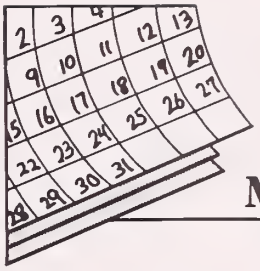
Harrison
Robert D. Hess

Mingo
Diane E. Shafer

Auxiliary Members

Central
Kathleen B. Huffman
Anne C. Ramirez

Preston
Mary Kay Miller



Medical Meetings

September

10—CNA First Generation Loss Control Seminar, Huntington.
14-16—Am. College of Nutrition, New Orleans.
15-18—Am. College of Nuclear Medicine, Lake Tahoe, Nev.
21—CNA Second Generation Loss Control Seminar, Wheeling.
22-24—Am. Academy of Facial Plastic & Reconstructive Surgey, Washington, DC.
23-30—Am. College of Radiology, Cincinnati.
25-28—Society of Thoracic Surgeons, New Orleans.
25-29—Academy of Otolaryngology—Head & Neck Surgery, Washington, D.C.
26-29—Am. College of Emergency Physicians, New Orleans.

October

3-6—AAFP, New Orleans.
3-7—Am. College of Chest Physicians, Anaheim, Calif.
8-12—Am. Academy of Ophthalmology, Las Vegas.
8-12—Am. Society of Anesthesiologists, San Francisco.
8-13—Am. Fertility Society, Atlanta.
12—CNA Second Generation Loss Control Seminar, Beckley.
13-16—Am. Society of Internal Medicine, Atlanta.
14-19—Am. College of Gastroenterology, New York.
16-18—6th Annual National Black Lung Conference, Charleston.
23-26—Medical Group Management Assoc., Kansas City, Mo.
30-Nov. 4—Am. Academy of Physical Medicine & Rehabilitation, Seattle.

November

6-9—Southern Medical Assoc., New Orleans.
12—Laser Surgery Seminar V, Charleston.

December

2-4—WV Chapter AAFP Weekend & Sports Medicine Conference.
4-7—AMA Interim Meeting, Dallas.

1989

January

27-29—22nd Mid-Winter Clinical Conference, Huntington.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Annual Audit, 1987

The annual audit of receipts and disbursements of the West Virginia State Medical Association for the calendar year 1987 has been completed by the firm of Ernst & Whinney, Certified Public Accountants of Charleston. The completed audit, with accountants' report, follows:

Ernst & Whinney
900 United Center

To the Council
West Virginia State Medical Association
Charleston, West Virginia

We have examined the statements of assets, liabilities, and fund balances arising from cash transactions of the several funds of the West Virginia State Medical Association as of December 31, 1987 and 1986, and the related statements of revenues and expenses of the unrestricted funds and changes in fund balances of the several funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in Note A to the financial statements, the Association's policy is to prepare its financial statements on a modified cash basis; consequently, certain revenues and the related assets are recognized when received rather than when earned, and expenses are recognized when paid rather than when the obligation is incurred. In addition, the financial statements of West Virginia State Medical Association Properties, Inc., a financially interrelated entity, has not been consolidated as required by generally accepted accounting principles. Accordingly, the accompanying financial statements are not intended to present financial position and results of operations in conformity with generally accepted accounting principles.

As more fully described in Note E to the financial statements, the Internal Revenue Service, in examinations conducted during 1984 and 1987, has contended that losses from advertising activities in prior years (the tax effect of which approximates $76,000) do not constitute net operating losses available for carryforward against taxable income. The Association filed a protest with the United States Tax Court appealing the findings of the examining agent. It is not possible, at present, for the Association to predict the outcome of its protest or the range of potential loss, if any, which might result from these actions.

In our opinion, subject to the effects on the financial statements of such adjustments, if any, as might have been required had the outcome of the uncertainty referred to in the preceding paragraph been known, the financial statements referred to above present fairly the assets, liabilities, and fund balances arising from cash transactions of the several funds of the West Virginia State Medical Association at December 31, 1987 and 1986, and the revenues and expenses of the unrestricted funds and changes in fund balances of the several funds for the years then ended, on the basis of accounting described in Note A, which basis has been consistently applied.

Charleston, West Virginia
March 28, 1988

Ernst & Whinney

STATEMENTS OF ASSETS, LIABILITIES, AND FUND BALANCES ARISING FROM CASH TRANSACTIONS— Note A
WEST VIRGINIA STATE MEDICAL ASSOCIATION

	December 31 1987	December 31 1986
UNRESTRICTED FUNDS		
ASSETS		
Cash	$197,975	$415,094
Investments (cost $579,657 in 1987 and $254,597 in 1986)	564,504	254,597
Note receivable	14,368	14,368
Receivable from affiliate—Note C	5,000	5,000
Due from restricted funds		14,952
Prepaid rent	20,000	20,000
Furniture and equipment (net of accumulated depreciation of $72,663, and $58,322, respectively)	108,047	96,775
	$909,894	$820,786
LIABILITIES		
State and American Medical Association dues collected in advance	$ 97,079	$104,100
Medical scholarship obligations—Note B	74,726	
	171,805	104,100
FUND BALANCES		
Undesignated	740,847	704,291
Designated for professional liability securities	12,395	12,395
Unrealized depreciation on equity securities	(15,153)	
	738,089	716,686
CONTINGENT INCOME TAX LIABILITY—Note F		
	$909,894	$820,786
RESTRICTED FUNDS		
ASSETS		
Cash		$ 517
Certificates of deposit		105,521
Investment in common stock	$ 4,250	4,250
	$ 4,250	$110,288
LIABILITIES		
Due to unrestricted funds		$ 14,952
FUND BALANCES		
Medical scholarship		91,086
Endowment	$ 4,250	4,250
	4,250	95,336
	$ 4,250	$110,288

See notes to financial statements

STATEMENTS OF REVENUES AND EXPENSES— UNRESTRICTED FUNDS — Note A
WEST VIRGINIA STATE MEDICAL ASSOCIATION

	Years Ended December 31 1987	Years Ended December 31 1986
Revenues collected:		
Dues	$932,871	$947,795
Advertising	42,275	36,266
Interest and investments	45,367	51,547
Contributions	19,396	4,750
Refund of expenses	11,358	2,184
Professional liability services — Note D	127,508	142,691
Other revenues, including grants from Endowment Fund: 1987—$1,200; 1986—$1,056	100,236	92,654
	1,279,011	1,277,887
Expenses paid and depreciation:		
Dues remitted to AMA	372,290	368,551
Salaries and wages	224,876	214,551
Employee benefits	31,982	49,520
Legal and accounting	18,428	17,897
Taxes—payroll	14,429	13,875
Office rent	78,000	72,500
President's stipend	10,000	5,000
Office supplies	9,451	21,587
Telephone	11,247	13,307
Postage	15,359	22,868
Travel	73,193	64,558
Convention speakers and supplies	74,361	80,124
Malpractice (Tort Reform)	40,478	103,934
Publishing and printing	112,989	115,477
Public relations	55,111	20,210
Depreciation expense	34,342	26,062
Legislative	22,587	18,351
Utilities	6,661	6,674
Other expenses	69,534	53,788
	1,275,318	1,288,834
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES	$ 3,693	$ (10,947)

See notes to financial statements

STATEMENTS OF CHANGES IN FUND BALANCES ARISING FROM CASH TRANSACTIONS — Note A
WEST VIRGINIA STATE MEDICAL ASSOCIATION
YEARS ENDED DECEMBER 31, 1987 and 1986

	Unrestricted Funds	RESTRICTED FUNDS: Medical Scholarship Fund	RESTRICTED FUNDS: Endowment Fund	RESTRICTED FUNDS: Flood Relief Fund
Balance, January 1, 1986	$727,633	$99,263	$4,250	$4,390
Deficiency of revenues over expenses	(10,947)			
Dues and contributions		24,348		3,175
Repayment of scholarships		1,700		
Interest collected		6,775		150
Scholarships to medical students		(21,000)		
Remittance to Charles Lewis Student Loan Fund		(20,000)		
Dividends received			1,056	
Grant to unrestricted funds			(1,056)	
Disbursements to flood relief projects				(7,715)
Balance, December 31, 1986	716,686	91,086	4,250	-0-
Excess of revenues over expenses	3,693			
Increase in unrealized (loss) on equity securities — Note A	(15,153)			
Dues and contributions		23,409		
Repayment of scholarships		2,000		
Interest collected		6,094		
Scholarships to medical students		(15,000)		
Dividends received			1,200	
Dissolution of Scholarship Fund — Note B	32,863	(107,589)		
Grant to unrestricted fund — Note B			(1,200)	
Balance, December 31, 1987	$738,089	$ -0-	$4,250	$ -0-

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS
WEST VIRGINIA STATE MEDICAL ASSOCIATION
December 31, 1987

NOTE A — PRESENTATION OF FINANCIAL STATEMENTS

The financial statements of the Association are presented using a modified cash basis of accounting. Under this basis of accounting, certain revenues, other than members' dues collected in advance, and the related assets are recognized when received rather than when earned, and certain expenses, other than medical scholarships, and the related liabilities are recognized when paid rather than when the obligation is incurred. Members' dues collected in advance are recognized in the year for which they are assessed. Medical scholarship obligations have been recorded on an accrual basis. In addition, prepaid rentals and receivables with certain related parties have been recorded on an accrual basis.

West Virginia State Medical Association Properties, Inc. (Properties) was formed during 1980 to acquire land and construct an office building for the Association. This project was completed during 1985. The accounts of Properties have not been consolidated in the accompanying financial statements.

In conjunction with this activity, the Association collected assessments on behalf of Properties and also loaned Properties $25,000 in 1981 from the general fund at a stated interest rate of 15%. During 1986 and 1985, no interest was paid to the Association. During 1986, the board approved the termination of the building assessment fund. The balance of the fund of $10,632 was applied as a payment against the note receivable leaving a balance due of $14,368.

In 1984, the Association advanced Properties $20,000 from the general fund which is considered prepayment of future rents.

Further, generally accepted accounting principles require that the Association and Properties be combined for financial reporting purposes. The principal asset of Properties is the building which serves as the headquarters of the Association. Properties' principal source of revenue is rent received from the Association. The impact of consolidating these entities has not been determined.

Investments in certificates of deposit, repurchase agreements, and U.S. Treasury bills are recorded at cost which approximates market value. Investments in equity securities are stated at the lower of cost or market value. There were no realized gains and losses on the sale of investments in 1987. Unrealized gains and losses on equity securities are credited or charged directly to the fund balance. The gross unrealized loss on equity securities in 1987 was $15,153.

Office furnishings and equipment are recorded at historical cost and are being depreciated over their estimated useful lives on a straight-line basis.

The Association has designated a special assessment fund to be used for professional liability education. The funds are to be used to inform physicians about current and potential problems with malpractice insurance and are accounted for as unrestricted funds.

The Association provides scholarships to students attending Schools of Medicine at West Virginia and Marshall Universities for the purpose of defraying expenses incurred by such students. Under certain conditions, as set forth in the scholarship agreements, the scholarships are repayable to the Association in whole or in part. Scholarships to students and repayments thereof are recorded directly in the Medical Scholarship Fund. This fund was dissolved in 1987. See further discussion of this matter under Note B.

Certain amounts in the 1986 financial statements have been reclassified to conform to 1987's presentation. Such reclassifications had no effect on the excess (deficiency) of revenues over expenses in 1986.

NOTE B—MEDICAL SCHOLARSHIP FUND DISSOLUTION

During 1987, the West Virginia State Medical Association council approved a resolution to dissolve the Medical Scholarship Restricted Fund and distribute the fund balance of $107,589 by paying the remaining scholarship obligations of $9,000 to individual participants and then dividing the remaining balance of $98,589 evenly among the Charlie Lewis Memorial Scholarship Funds at West Virginia University and Marshall University, and the West Virginia State Medical Association general unrestricted fund. The dissolution is summarized as follows:

		Medical Scholarship Obligations	Distribution to Unrestricted General Fund
Medical Scholarship Fund Balance	$107,589		
Distribution:			
Remaining scholarship obligations	(9,000)	$ 9,000	
	98,589		
Charlie Lewis Memorial Scholarship Fund:			
West Virginia University	(32,863)	32,863	
Marshall University	(32,863)	32,863	
Distribution to unrestricted fund	(32,863)		$32,863
	$ -0-	$74,726	$32,863

NOTE C—RELATED PARTY

In 1986, the Association approved a $50,000 line of credit to Preferred Medical Care Network of West Virginia, Inc. (PMCN), a preferred provider organization established to benefit Association members. This line of credit was established to assist PMCN with its initial start-up costs. During 1986 $5,000 was advanced to the organization. No advances were made in 1987, however, an additional $45,000 was advanced early in 1988 to assist PMCN in its operation.

NOTE D—PROFESSIONAL LIABILITY SERVICES

During 1981, the Association entered into separate agreements with Continental Insurance Agency (CNA) and McDonough Caperton Shepherd Group, Inc. (MCSG) to provide educational and marketing services to the Association members relating to professional liability insurance. Under the terms of the agreement, the Association is to receive up to $100,000 a year from each company. The Association received payments of $100,000 and $100,000 from CNA and $27,508 and $42,691 from MCSG in 1987 and 1986, respectively.

NOTE E—CONTINGENT INCOME TAX LIABILITY

Revenues of the Association are generally exempt from federal income tax under Section 501(c)(6) of the Internal Revenue Code. However, certain income, primarily advertising revenues and income received under agreements with insurance providers for their educational and marketing services and use of the Association's membership lists, is considered unrelated business income and is taxable to the extent it exceeds allocable expenses.

In examinations during 1984 and 1987, the Internal Revenue Service contended that losses arising in prior years from advertising activities do not constitute net operating losses available for carryforward against taxable income. Approximately $ -0- and $9,000 of such prior year losses have been offset against unrelated business income in filing the Association's 1987 and 1986 annual information returns and approximately $85,000 would be available for carryforward from 1987 to 2003. Of the total losses available for carryforward as of December 31, 1987, approximately $7,000 will expire in 1996, $42,000 in 1997, and $22,000 in 1998 and $14,000 in 2003.

The Association filed a protest with the United States Tax Court appealing the findings of the examining agent. No provision has been made in the financial statements for any liability for federal income taxes. If the Association is not successful in its appeal, the tax liability would approximate $76,000 as of December 31, 1987.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

Methotrexate May Help Arthritis

A cancer-fighting drug, used in low dosages, may offer hope to rheumatoid arthritis sufferers for whom other remedies have failed, a WVU study shows.

James E. Brick, Assistant Professor of Medicine, said workers at WVU have been studying the effects of the drug methotrexate on chronic rheumatoid arthritis patients since the late 1970s, and can now say it is relatively safe when used under proper guidelines and conditions.

"When every other method has failed, many patients will respond to this drug. They will actually feel better, with less pain and less swelling in the joints," Doctor Brick said.

He cautioned, however, that the drug isn't "magic" and that it does carry possible side effects.

Studies many years ago had shown that in some patients, methotrexate damaged the liver, especially when given daily and when alcohol was not prohibited.

Liver Damage Minimized

The WVU study has shown that in a low weekly dose, the danger can be minimized.

"If patients take it only once a week and in very small doses, the chances of having liver damage are much smaller," said Doctor Brick.

Methotrexate, used mainly for treatment of childhood cancers, has been used to relieve the symptoms of rheumatoid arthritis for years, but the WVU study is aimed at measuring long-term effects of the drug.

Although cautious in labeling methotrexate a "wonder drug," Doctor Brick said it is safer in many ways than similar drugs that suppress the immune system. Some of those drugs, in rare cases, have been shown to increase a patient's chances of developing cancer.

High doses of methotrexate have been used for years to treat children with leukemia without increasing their chances of developing cancer later.

Other side effects of the drug may include rashes, sores and nausea. Lower blood counts also may result, affecting the body's ability to fight infection.

Doctor Brick also warned that the medicine won't work on everyone but said many patients who are treated with it will respond.

He advises patients to be sure of their diagnosis before going into treatment and noted that the drug doesn't help osteoarthritis, the most common form of arthritis.

There are seven million rheumatoid arthritis sufferers in the United States today, of whom three-fourths are women.

"In many people it's a terrible disease. The classical treatment has been a start with the least hazardous treatments and move to the more dangerous things," said Brick.

Among the early-symptom treatments are drugs such as aspirin, Motrin, Nuprin or Advil.

As tolerance builds, the patient moves into the second phase of treatment which includes gold injections or taking D-penicillamine, Brick explained.

Injections of gold salts and gold pills have been used to treat rheumatoid arthritis for more than 50 years, and D-penicillamine is also commonly used. Both drugs carry side effects which may affect a minority of patients.

"Most rheumatologists like gold shots the best. But only 50 per cent of the people treated in this manner can continue with injections for long periods of time. Many patients will not tolerate or be helped by D-penicillamine or gold pills either," Brick explained.

"That leaves a big hole, and what do you do? That's where methotrexate can help and hopefully make life more tolerable for some people."

Brick noted that, unfortunately for many patients, "rheumatoid arthritis disease becomes like their career."

Health Columns Now in Booklet

The "Little Doctor," who first endeared himself to West Virginians in a series of comical health-related public service announcements, is back with some big advice.

Dr. David Z. Morgan, who plays the miniature medicine man, has been providing a wealth of health information in his weekly question-and-answer newspaper columns, published under the titles "House Call" and "Doctor's Corner." Now hundreds of his answers to readers' questions have been collected in a new booklet, "The Little Doctor Makes House Calls."

The booklet is free and is available from WVU School of Medicine.

David Z. Morgan, Professor of Medicine and Director of the Geriatric Program at WVU, is a Past President of the West Virginia State Medical Association.

Doctor Morgan explained that he decided to write the weekly columns, which are distributed statewide, because he thought "many timely topics could be presented more accurately and clearly than they are in some syndicated columns."

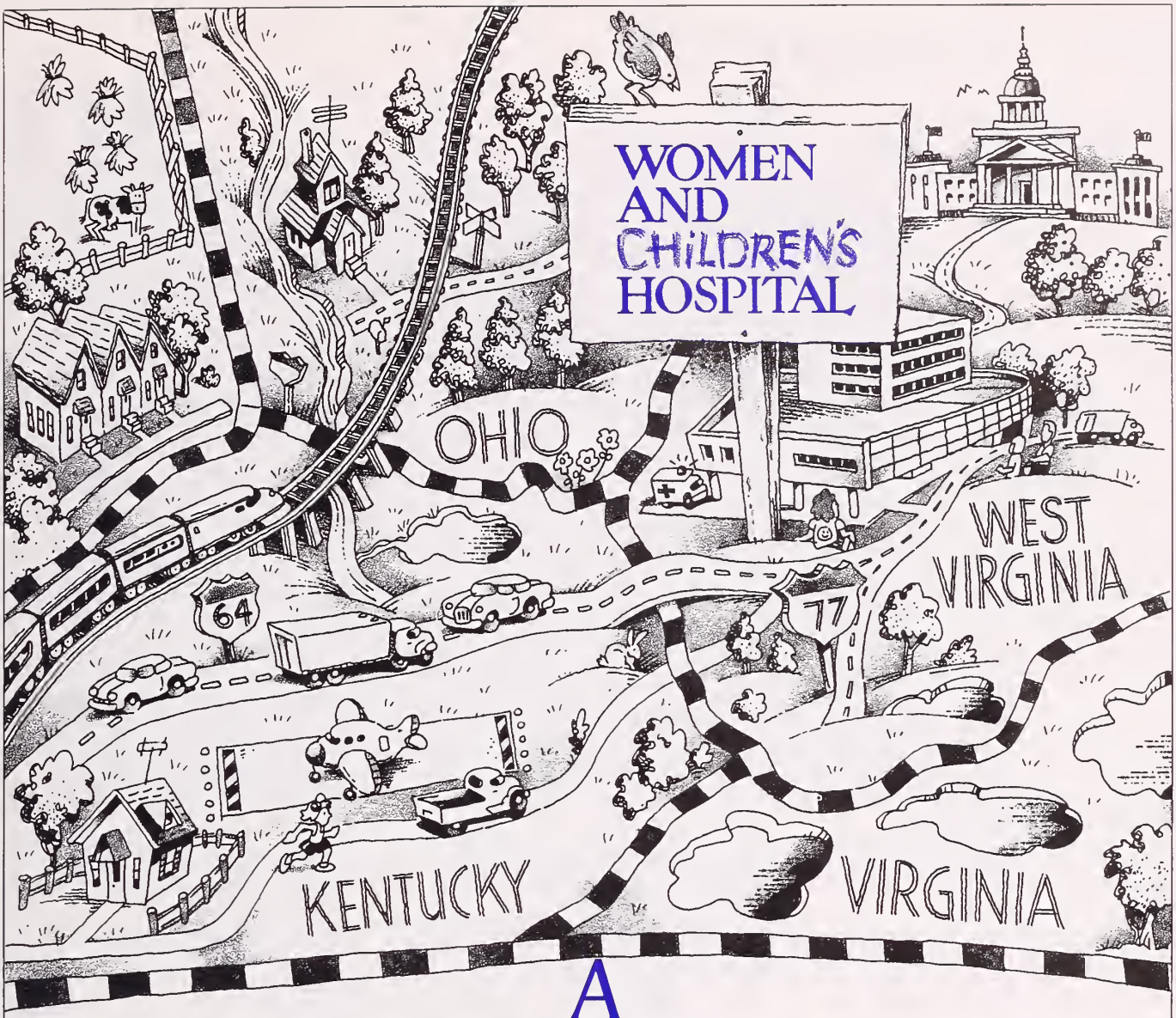
He cautioned, however, that the columns should not act as a substitute for a doctor's advice and care or provide a basis for initiating or changing any specific treatment.

The most accurate and reliable responses to patient questions will always come from your own physicians, whose answers will be based on a detailed history, physical examination and laboratory and X-ray findings," Doctor Morgan said.

Other physicians' advice is also contained in the 44-page booklet.

Copies available

For a copy of the booklet, contact the Dean's Office, School of Medicine, Health Sciences Center, West Virginia University, Morgantown, WV 26506, phone 304-293-4511.



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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Doctor Brown Named Anatomy Chairman

Patrick I. Brown, Ph.D., one of the earliest faculty members of the School of Medicine, has been appointed Chairman of the Department of Anatomy, Dean Lester R. Bryant, M.D., has announced.

Doctor Brown, 45, joined the faculty in 1975. He has been Interim Chairman of the Department since 1986. He also is Associate Dean for Student Affairs, and will continue in that role.

"Doctor Brown has contributed greatly to the success of the School of Medicine," Doctor Bryant said. "He's been an outstanding teacher in the Department of Anatomy, a dynamic and empathetic Associate Dean for Student Affairs, and a strong Interim Chairman of the Department of Anatomy.

"His appointment as Professor and Chairman of the Anatomy Department will firmly establish the leadership and teaching excellence in that important component of our biomedical sciences program," he added.

Since he joined the faculty, Doctor Brown repeatedly has been honored by students for his teaching and assistance. His numerous awards include a "Special Recognition Award for Outstanding Service" from the Class of 1986, whose members called him the professor who contributed most to their four years of medical education.

While at Marshall, he has developed, or been a principal participant in developing, three anatomy and biological sciences courses. He also has been strongly involved with Marshall's Search Committee on Recruiting Excellent Students and its annual Academic Festival. He serves on numerous university committees including the School of Medicine's Admissions Committee and the Academic Standards Committee.

In addition to his teaching and student affairs activities, Doctor Brown remains active in research. He has been co-investigator on three National Institutes of Health grants with colleagues in the departments of Pharmacology and Anatomy.

He is a member of several honor and recognition societies including the leadership honorary Omicron Delta Kappa.

News in Brief

• The School of Medicine has received a Biomedical Research Support Grant and a small instrumentation grant totaling nearly $32,000 from the National Institutes of Health, according to Dr. Peter J. Kasvinsky, Director of Research Development and Graduate Studies.

The BRSG will provide important seed money for new research projects, Doctor Kasvinsky said. The small instrumentation grant, awarded by the National Heart, Lung, and Blood Institute, will be used to purchase an ultramicrobalance for use by School of Medicine researchers.

• Six high-school students got medical research experience through summer jobs at the School of Medicine as part of the Minority High School Apprentice Program sponsored by the National Institutes of Health.

This program, funded by a $6,000 NIH grant, was created to interest minority students in health-research careers.

The students were from high schools in Huntington, Williamson and South Point, Ohio. They worked on such projects as medical-related computer programming and graphics, research into the complications of diabetes, and studies of the nephrotoxicity of certain chemicals.

• Dr. Gary L. Wright, Chairman of Physiology, was named a "Centennial Outstanding Alumnus" of New Mexico State University as part of that university's centennial celebration.

Doctor Wright earned a master's degree in environmental physiology from New Mexico in 1970. His "outstanding alumnus" award was made by NMSU's College of Arts and Sciences.

• Marshall's Social Work Program, now part of the Department of Psychiatry, has been granted candidacy status for accreditation purposes, a step President Dale F. Nitzschke calls "critically important" to the program's future.

Director Binni Bennett, Associate Professor of Psychiatry, said faculty would take a two-pronged approach to achieving accreditation within the three-year candidacy period by strengthening curriculum and providing new student learning sites.

Occupational Therapy President

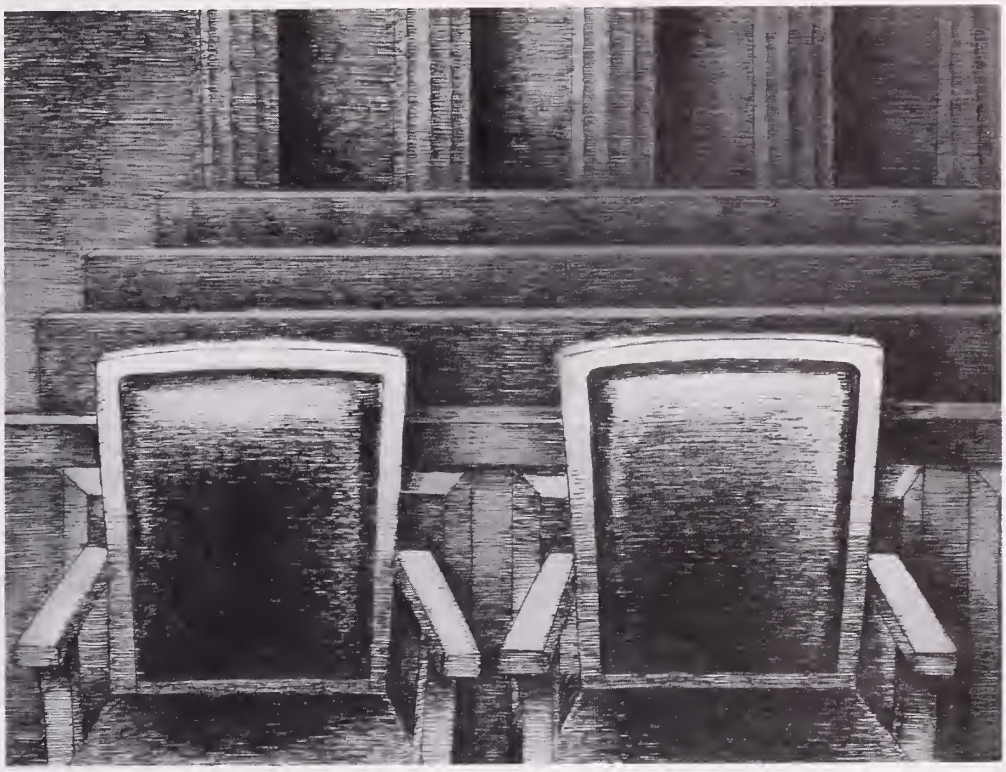
Elizabeth B. Devereaux, OTR/L, MSW, Associate Professor of Psychiatry, has been elected President of the American Occupational Therapy Foundation.

Devereaux developed and directs Marshall's Division of Occupational Therapy, which provides services to numerous organizations throughout southern West Virginia and Ohio.

She has been widely involved in human services organizations in the Parkersburg, Charleston, and Huntington areas. She helped organize the West Virginia Occupational Therapy Association, served two terms on the Governor's Committee for Employment of the Physically Handicapped, and was appointed to the first West Virgina Board of Occupational Therapy. She was adjunctive therapy director for the Department of Mental Health from 1965 to 1972.

She received her MSW from West Virginia University.

She has contributed chapters for the last three editions of a widely used textbook in her field, *Willard & Spackman's Occupational Therapy,* and makes presentations for professional and lay groups nationwide.



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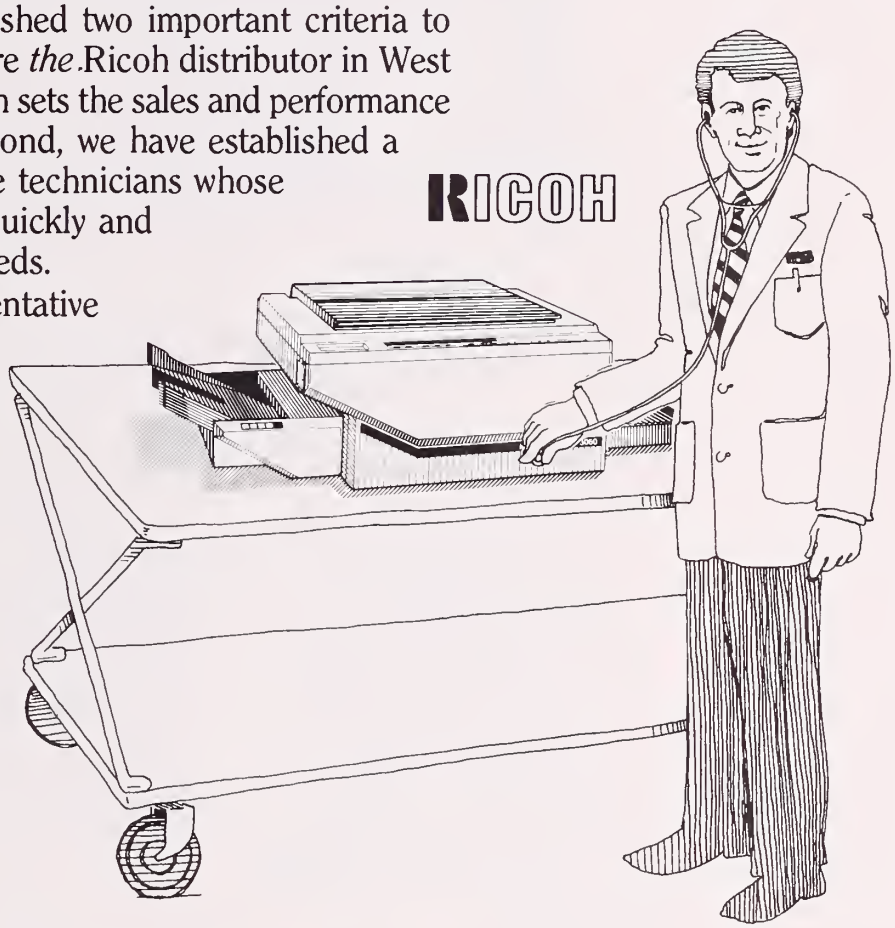

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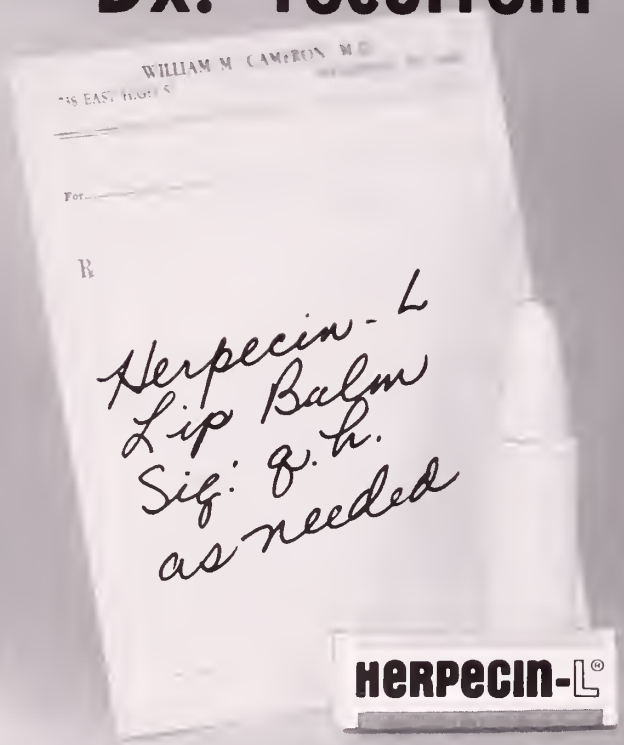

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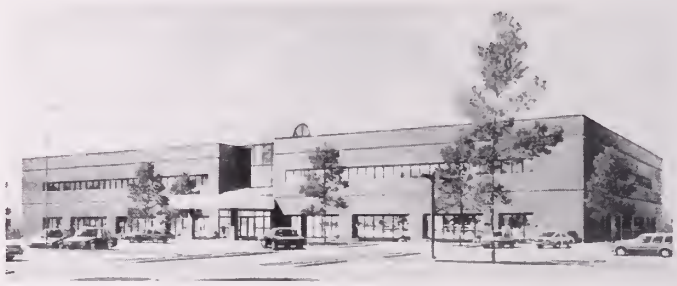

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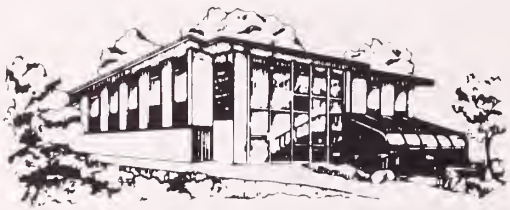

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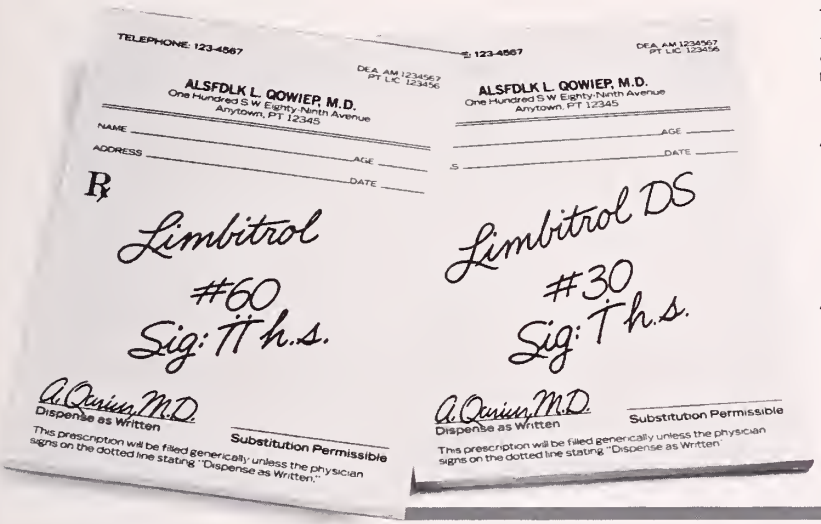

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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.,* operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

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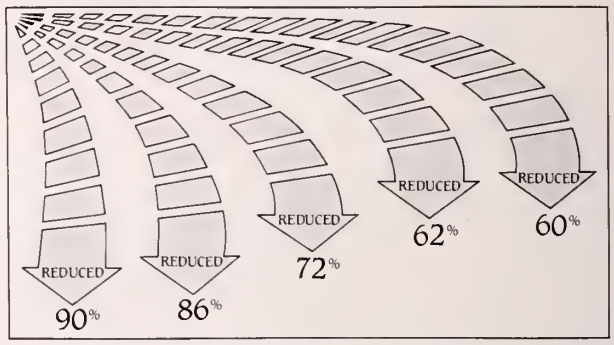

*Patients often presented with more than one somatic symptom.

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October 1988 West Virginia State Medical Association Volume 84 No. 10

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Get Involved
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RCTs — Page 461

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Front Cover

View of wildlife habitat in Monongahela National Forest as seen from Olson Fire Tower in Tucker County. Photo courtesy of *Wonderful West Virginia* Magazine. Gerald Ratliff, photographer.

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ROSALYN P. STERLING-SCOTT, M.D.

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Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

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FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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Adverse Reactions: (percentage of patients)
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- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever) 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

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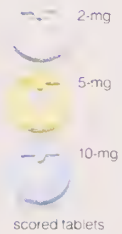

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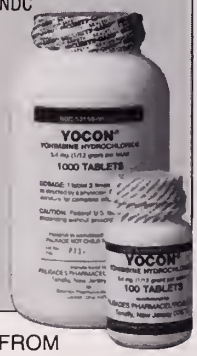

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3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Continue the Fight

BILL M. ATKINSON, M.D.
Parkersburg, President, West Virginia State Medical Association

One hundred and twenty-one years ago on April 10, 1867, 33 physicians from northwestern West Virginia met in Fairmont and formed the West Virginia State Medical Society. Physicians traveled from 12 counties, as far south and west as Mason County, as far north as Ohio County and as far east as Preston County. This historical event was the first effort for a statewide medical organization. Their mission was to establish a fellowship for the exchange of scientific knowledge. They chose the April date so that they could send state representatives to the American Medical Association, which was meeting in May of that year in Cincinnati, Ohio.

The West Virginia State Medical Society is now the West Virginia State Medical Association. Little did those 33 physicians realize that 121 years later we would be spending as much time at our Annual Meeting on social and political issues as we would on the exchange of scientific knowledge.

Cordell A. De La Pena, M.D., left, 1987-88 President, administers the oath of office to Bill M. Atkinson, M.D., as new WVSMA President during the final session of the House of Delegates August 20 at the Association's Annual Meeting in White Sulphur Springs at the Greenbrier.

Crisis or Challenge?

Today! We in medicine face many problems. We can face those problems by reaction or proaction, with optimism or pessimism, but we must face them. The question that I pose to the members of this Association is: Do we want to consider the issues of medicine as a crisis or challenge? If we consider them as a crisis, then we will become complacent and allow ourselves to be overrun with multiple rules and regulations that threaten us with fines and/or jail sentences, that threaten us with ever-increasing costs to maintain our practices, and with ever-increasing costs to keep liability insurance to protect our financial security. These threats come from the federal and state governments, from insurance carriers, both liability and health, and from regulations on the hospitals in which we practice. We are aware that these problems will not just go away, so we must either face them as individuals or we must face them with a combined effort through our local, state and national organizations. A major administrative goal for this year is to increase the membership in our state Association and the American Medical Association.

Tort Reform, AIDS, PROs

One of the issues that faces us today is the ever-increasing problem

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in the medical liability arena. There is good news from the recent statistics that show the number of claims is down, but the bad news is that the dollar amount of the awards is up. There is also good news in that our endorsed carrier, CNA, is not going to raise rates for 1989. This may or may not be a result of the tort reform legislation that was passed in 1986, but it behooves us to continue to support actively the many facets of tort reform and to evaluate very carefully the AMA proposal of "Alternative Liability Reform."

We as an organization must continue to fight for AIDS legislation that is medically protective for West Virginians. AIDS seems to be an ever-changing disease; we must be vigilant and keep pace with that change and update our legislative efforts. With those efforts we should try to protect the civil rights of all of our citizens, but not to the point of sacrificing the public for the individual.

We must continue to work with the Professional Review Organization (PRO) by opposing those mandatory requirements that are unwarranted, and supporting those that are advantageous to the improvement of quality for patient care.

Uncompensated Care

The subject of uncompensated medical care has become a big problem both socially and politically. Neither the government nor the public sector can continue to subsidize the cost shifting which has taken place for the past years. As Dr. John Kitzhaber, President of the Oregon State Senate, stated in an article in the *Western Medical Journal* in June of this year, the first step in solving this crisis is to establish a clear social policy on health care spending, the second is to define "adequate health care," and the third is to develop a universal insurance system to guarantee access to that care. During the coming year we need to assess this problem and determine if we need to appoint an ad hoc committee to work with the Legislature in developing a social policy. If that social policy is to be effective, it must determine the most efficient and equitable way of spending our limited health care dollars. Some of the types of decisions that are to be made are: Do we provide prenatal care or do we spend our money taking care of premature babies in neonatal intensive care units? Do we work to prevent organ disease, or do we wait until the organs are diseased and replace them? These are the questions that the policy must address.

The most difficult task is the defining of "adequate health care." We as physicians feel that all patients should have access to all the technical advances that are available to us today, but the politicians tell us that society can no longer afford such advanced care for everyone. If such policies and definitions are going to be made, then the inevitable is the rationing of health care. We as an organization must be willing to assist in developing such policies or we as physicians will be forced to do any rationing of health care that might occur in the future. We as a profession are sure that we don't want to be saddled with that responsibility.

Help Needed

I ask that each of you join with us to accept the issues that face the medical profession as an optimistic challenge, and leave the crises to the pessimists. Help us to increase our membership by personally contacting your fellow physicians who are not members. Help us to lobby effectively by volunteering some days of your time to be in Charleston to meet and discuss our issues with the legislators from your areas. I do not need to remind you that "Together we stand, divided we fall." At no other time in our 121 years have we needed unification and cooperation more than we do now. We must take control of our destiny or we as a profession will be reduced to a public utility. Thank you.

*Presidential Address**

Medicine is our Profession

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Mr. President Elect, Chairman of the Council, Members of the West Virginia State Medical Association, honored guests, ladies and gentlemen.

It is a high honor to be President of the West Virginia State Medical Association, and certainly it is the highest honor I have received in my professional life. I have the deepest admiration and indebtedness for all my predecessors who held this office, and I will feel privileged to be joining them in a few days in the ranks of past Presidents. I also have unparalleled respect for the many outstanding physicians who have been involved with the West Virginia State Medical Association, and also for each of you for your commitment to organized medicine in behalf of the health of the people of West Virginia.

But most of all, I have deep respect for our House of Medicine and what it stands for—compassion, caring, and healing with a commitment to excellence. We must strive to achieve this excellence and we will achieve it with unity, resolve and our inherent ability to cope with the changing times occurring in medicine today. Because we are physicians and have the natural insight to recognize change by nature of our training and by nature of our determination to direct this change, we will achieve unity and resolve.

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This resolve will enable us to recognize changes on the horizon which will prepare us to implement actions to strengthen our House of Medicine for ours and our patients' sake.

We are told by forces outside of medicine that this excellence should be measured by outcomes of clinical indicators of quality assurance. As patient advocates, we say "A patient is more than a clinical indicator and a patient is more than just DRG dollars." While we are encouraged to invest ourselves in quality assurance and utilization review, and squeeze the most quality out of the least amount of dollars, the court tells us that we will be sued if our medical judgment regarding individual patients is influenced by economic reasons.

"The conflict at the root of our increasing frustrations and disillusionment is that we are burdened with great legal, fiscal and clinical responsibility, and at the same time we have suffered concomitant loss of authority."

The conflict at the root of our increasing frustrations and disillusionment is that we are burdened with great legal, fiscal and clinical responsibility, and at the same time we have suffered concomitant loss of authority.

"Medicine is our profession"
"Quality assurance is a physician issue"
"Quality assurance is a physician's responsibility"
Quality assurance is a physician's authority"

The equation is simple and plain. If you are responsible for something you must have control of it.

Since the vast majority of quality assurance and utilization activities will occur in hospitals, and because almost all of us practice in hospitals, it behooves us to develop a strong and autonomous medical staff. The medical staff's autonomy and self-governance are basic to our ability to provide medical care. It's a proven fact—physician autonomy and self-determination improve the practice of medicine. However, there has been increasing erosion of this self-governance and professional autonomy. There have been continuing threats of loss of authority at key decision points in providing medical care while still having the responsibility for the content and outcome of care placed squarely on our shoulders.

Despite all of this, we continue to provide quality care regardless of the innumerable restrictions placed upon us. I urge all of you to support the implementations of the hospital and medical staff section (HMSS) of the House of Delegates as together we attempt to develop the means of working for a strong medical staff and playing dominant roles in the development and monitoring of all quality-assurance physician activities.

Tort Reform

For the last few years, our Association has gone to the

Legislature with a tort reform package and, because of Dr. David Morgan's efforts three years ago, we received some relief. The last two years have been disappointing for us. We felt, and I am certain most of you felt, that we should have gotten off faster at the starting block. We tried, and despite efforts by our lobbying team, we were not very successful. Again, a resolution has been introduced calling for almost the same articles of tort reform, and I am certain it will be passed by this House of Delegates, and the Association's responsibility will be to implement its introduction into the State Legislature and to lobby tenaciously for it. I am certain it will get off the starting block faster this time around. However, I must advise our membership that effort should be initiated at the grass-roots level as soon as possible and months before the opening session of the Legislature.

AIDS, Other Concerns

The recent AIDS bill signed by the Governor was not what we wanted, but it is certainly something we can all live with. The initial bill passed by the Legislature and vetoed by the Governor contained provisions most of us found repugnant. Your Association and many of its members should be given the credit for this veto. The success of our efforts at that time demonstrated that we have some political clout.

We have met with AARP and discussed care for the elderly. We have met with the Trial Lawyers Association of West Virginia and discussed a variety of issues concerning expert witnesses, release of medical records, and depositions. The dialogue will continue, I am sure, with these two organizations in the months to come. Negotiations will continue with CNA regarding our premiums. We will meet with and listen to our nurses and analyze our mutual concerns.

From all of this, one can easily conclude that it is not easy to be President of the West Virginia Medical Association.

However, I am confident to say, without reservation, with Dr. Bill Atkinson leading the way, and with the assistance of Mert Scholten and Mary Hamilton, Custer Holliday, Sue Shanklin, Patty Barnhart, and Dee Crabtree, our cup should runneth over.

No Equal to Being President

In bringing to a close my year as your President I want to thank you very much from the bottom of my heart for giving me this opportunity and this honor. Never did I imagine as I was growing up in Hawaii, the 50th state of the Union, and in the Philippines, a former commonwealth of the United States, I would ever have this privilege. Nothing in my career or my life has ever equaled it and nothing ever will. And lastly, to my family, thank you for your love, support, and understanding for the most rewarding year of my professional life. May God bless you all.

CO_2 Laser Surgery for Oral Cancer

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Introduction in 1972 of the carbon dioxide laser for removal of laryngeal papilloma by Strong and Jako (1) ushered in a new dimension in otolaryngologic surgery of precision, atraumatization and acicatrization.

Transoral surgery using the carbon dioxide laser was performed on 450 patients with intraoral lesions. The carbon dioxide laser was used to vaporize, excise, resect and debulk various intraoral lesions. The advantages of carbon dioxide laser are: precision, facility, rapidity, less bleeding, prompt healing, and avoidance of tracheostomy and extended hospitalization.

The carbon dioxide laser has been a useful tool for surgery of superficial intraoral lesions as reported by Strong et al. (2) in 1973. In 1979, Strong et al. (3) also reported cases of early oral carcinoma treated with the carbon dioxide laser, and they had shown that transoral resection of early oral carcinoma was feasible and was facilitated by the use of the CO_2 laser coupled with the operating microscope. They found the transoral CO_2 laser technique to have low morbidity rate, low complication rate, and the results were acceptable compared to conventional methods. Guerry et al. (4), in 1986, reported a five-year follow-up of 107 CO_2 laser resected intraoral carcinoma. They also concluded that the long-term results were acceptable, the complication rate low and healing excellent in all cases. In 1987, Duncavage and Ossoff (5) reported their success with the use of the carbon dioxide laser as both a diagnostic and therapeutic tool for early carcinoma of the oral cavity. This paper recounts seven years' experience with the use of the CO_2 laser for intraoral surgery.

Materials and Methods

Between 1980 and 1987, a total of 450 intraoral lesions, excluding infected tonsils, were treated at the Eye and Ear Clinic of Charleston, West Virginia, using the CO_2 laser transorally. Thirty-five per cent (135) of these 450 cases were malignant lesions, 95 per cent of which were squamous-cell carcinomas. There were 94 men and 41 women with squamous-cell carcinoma whose ages ranged from 30 years to 92 years. The anatomical sites involved are shown in Table 1, and the staging of cases is classified in table 2. A 40-watt CO_2 laser was coupled with a Zeiss operating microscope (300 mm lens) and a micromanipulator (joystick). A helium-neon light was the aiming beam that was projected at a spot size of one mm to three mm. Control of bleeding was accomplished with the use of controlled hypotension anesthesia, electrocautery and laser defocusing for blood vessels under 0.5 mm in diameter.

TABLE 1
Anatomical Sites

Tongue	- 60
Buccal Mucosa	- 40
Pharynx	- 10
Tonsils	- 10
Floor of Mouth	- 15

TABLE 2
Staging

Stage O	40
Stage I	60
Stage II	25
Stage III	10

All intraoral lesions were laser treated transorally by vaporizing, excising, resecting or debulking. Lesions were stained before lasing with one per cent toluidine blue (6) to map out dysplastic oral mucosa. All patients were placed in Trendelenberg position with the surgeon operating from a Rose position (head of patient). Exposure was achieved with the use of scopes, retractors and mouthgags. Commonly, a power setting was at 18-20 watts and at 0.2 sec-0.5 sec duration or continuous mode. Ether hooks and electrocautery suction tips attached to a filtered suction tubing were used to evacuate the laser smoke. Safety measures were observed for the patient, the operating room personnel and the surgeon (7).

Mucosal defects of less than three cm were allowed to heal by secondary epithelialization, especially those defects of the base of the tongue, tonsillar area, buccal area, and floor of the mouth (Figure 1). Healing was complete in three to six weeks with minimal scarring and excellent function (Figure 2).

Tracheostomy was required in only one patient who had developed a severe laryngeal edema due to a floor-of-mouth abscess 48 hours after a floor-of-mouth laser resection. Prophylactic broad spectrum antibiotics were given intraoperatively in all cases. Mouth care consisted of hydrogen peroxide mouthwash four times daily and at bedtime. Mild analgesics were prescribed for postoperative pain. Seventy per cent of the patients were discharged on the same day of their surgery, and 30 per cent the day after surgery.

(Continued on Next Page)

Figure 1. Leukoplakia with squamous-cell carcinoma floor of mouth and undersurface of tongue.

Figure 2. Post CO_2 laser resection and healing by epithelialization two months after of patient in Figure 1.

For margins in lesions involving the retromolar trigone, alveolus or floor of the mouth, a marginal bone resection was accomplished with the combined use of the CO_2 laser and a chisel. Although the CO_2 laser does not cut bone effectively, it does render the bone easier to be chiseled out. T_2 lesions of floor of the mouth and oral tongue are usually combined with a suprahyoid neck dissection and followed with cobalt radiation one month postoperatively.

There were eight instances of laser-related complications (Table 3). A 60-year-old man developed floor-of-mouth abscess with severe laryngeal edema 48 hours after a floor-of-mouth laser resection for a T_1 squamous cell carcinoma. This was managed by tracheostomy, drainage of the abscess and administration of intravenous antibiotics. A tongue dehiscence occurred in a 78-year-old man who underwent a laser hemiglossectomy with primary repair. This was treated with a completion hemimandibulectomy and primary closure. A patient sustained a lip burn when the retractor slipped during a floor of the mouth resection. This healed promptly with antibiotic ointment applications. There were four local recurrences involving one base of tongue, two anterior tongue, and one floor of mouth. All of these were T_1 lesions and all were laser reexcised with good results.

TABLE 3
Laser-Related Complications

1 floor-of-mouth abscess
1 severe laryngeal edema
1 lip burn
1 tongue dehiscence
4 local recurrences

Discussion

The use of the CO_2 laser for transoral resection of oral carcinoma affords the surgeon precision, good visualization, and facility. There is less postoperative pain, bleeding and edema; thus tracheostomy and extended hospitalization are avoided. Since the CO_2 laser is a non-ionizing radiation, its repeated application is feasible. The CO_2 laser coupled with the microscope and the joystick minimizes excessive tissue handling; hence extensive tissue edema and tumor cell spillage are diminished.

Selection of cases for CO_2 laser transoral resection is important for best results. Extensive bone involvement, T_3 lesions, and poor exposure preclude the transoral use of the CO_2 laser. It can be used, however, as a debulking tool for airway and swallowing palliation and prior to chemotherapy or radiotherapy. It can also be combined with either a supraomohyoid neck dissection, modified neck dissection or radical neck dissection. In this report, T_2 lesions with or without clinically palpable level I or II nodes were combined with a supraomohyoid neck dissection and were followed with radiation one month later.

The CO_2 laser is an invaluable tool for transoral resection of intraoral carcinoma. Selection of cases is important for optimal results. It is also an effective debulking tool for swallowing and airway palliation, and for use prior to chemotherapy, radiation or definitive surgery of malignant intraoral tumors.

Acknowledgements

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Cervical Thymic Cyst: Case Report

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A case of a cervical thymic cyst is presented. Although rare, cervical thymic cysts should be included in the differential diagnosis of painless neck masses, particularly in the pediatric age group.

Case Report

Thymic cysts are rare and may present in the neck or mediastinum. This article describes such a case.

A three-year-old male child was admitted to Fairmont General Hospital for a progressively enlarging left cervical mass of six months' duration.

Initial examination revealed a 6.0-cm.-x-4.0-cm. anterior cervical mass below the angle of the mandible and anterior to the sternocleidomastoid muscle. This mass was not adherent to the skin and was mobile. It did not transilluminate. The remainder of the examination was within normal limits. A branchial cleft cyst was suspected and the patient was scheduled for neck exploration.

At surgery, an encapsulated, multilobulated, 5.6-cm.-x-3.5-cm. mass was noted beneath the platysmus muscle medial to the carotid artery, lateral to the esophagus and superior to the hypoglossal nerve. At the superior portion of the mass a stalk was ligated. The mass was not adherent to surrounding tissue and was removed by blunt dissection (Figure 1). Follow-up of two years revealed no recurrence of the lesion.

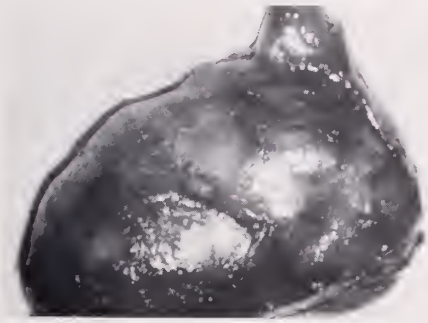

Figure 1. The 5.6-cm.-x-3.5-cm. cystic mass.

Microscopic examination showed the cyst wall to be lined with flattened, cubodial-type epithelial cells in some areas and elsewhere by stratified, squamous epithelium. The wall of the cyst contained thymic tissue characterized by aggregates of lymphocytes and scattered Hassall's corpuscles (Figure 2). Cholesterol granulomas were noted, characterized by cleft-like spaces bordered by multinucleated foreign-body-type giant cells (Figure 3).

Discussion

The thymus gland originates from the third pharyngeal pouch and descends into the anterior mediastinum. Thymic tissue can be deposited anywhere along this path of descent, forming cysts or thymomas (1). During the sixth week of fetal life, thymopharyngeal ducts start to form from endodermal invaginations along the ventral aspect of the thyroid pharyngeal pouches.

By the seventh week, the thymopharyngeal ducts detach from the pharynx and form a pair of hollow structures called thymic primordia which later become paired, solid masses by a process of endodermal cell proliferation. These primordia descend into the thorax over a period of three weeks by developing stalks which approach each other but never fuse. When this process ends, the proximal portions of the stalks atrophy and later disappear. By the tenth week, adjacent mesenchymal cells invade the thymic primordia and destroy the previous solid cords of primitive pharyngeal endoderm. The remaining endodermal epithelium degenerates later into Hassall's corpuscles (2).

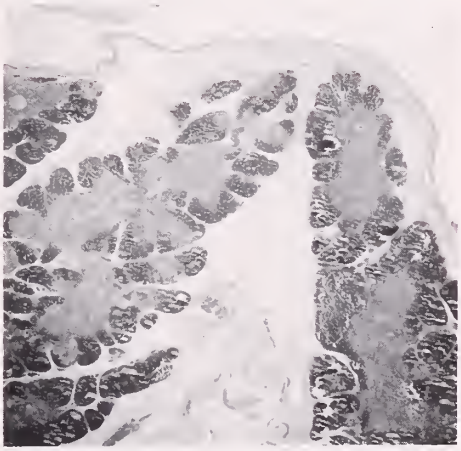

Figure 2. Thymic tissue lined by cuboidal, epithelial cells.

The fourth pouches contribute only a small amount of thymic tissue which later becomes incorporated within the primordia of the main gland (3).

Masses from the third pharyngeal pouch may be adherent to or located within the carotid sheath, and pass caudal and lateral to the thyroid capsule and along the anterior border of the sternocleidomastoid muscle to the manubrium. They course from the pyriform sinus through the thyrohyoid membrane between the common carotid artery and vagus nerve posterior and inferior to the glossopharyngeal nerve, then lateral to the thyroid gland. About 50 per cent of cervical thymic cysts are continuous, with mediastinal masses either by direct extension or continuation of a vestigial remnant (1).

Cervical thymic cysts usually appear in the pediatric age group. Two thirds will present in the first decade of life and the rest within the second decade (4). Fahmy found more occurrence in males than in females. Most patients exhibit a slowly enlarging, painless mass.

No definite tests may be performed before surgery to establish the

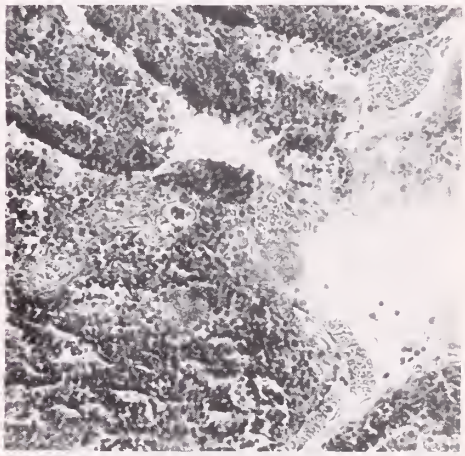

Figure 3. Scattered Hassall's corpuscles surrounded by lymphocytes.

diagnosis. Few cases are diagnosed before excision. Ultrasonography and Computerized Axial Tomography may be used to define margins of the cyst, important in establishing possible mediastinal extension (5).

Differential diagnosis should include: brachial cleft cysts, cystic hygromas, thyroglossal duct cysts, vascular hematoma, an inflammatory lymph node, A-V malformation, external laryngeal diverticulum, cystic teratoma, and tumors of mediastinal origin (2, 6).

Cervical thymic cysts should be included in the differential diagnosis of cystic neck masses. Surgery is usually both therapeutic and diagnostic with no recurrence.

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Familial Myalgic Myopathy

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Six clinically affected members from a large West Virginia kindred displaying autosomal dominant inheritance of a myopathy characterized by exertional myalgia and fatigue underwent a total of nine muscle biopsies. The biopsy specimens varied from normal to severely myopathic, even within the same patient. The morphologic abnormalties, when present, were very unevenly distributed. Histopathological heterogeneity appears to be an important characteristic of this myopathy which we have designated familial myalgic myopathy.

Introduction

Myalgia is a common symptom which can result from a variety of toxic, metabolic, or inflammatory conditions (1). Most myalgic patients, however, have relatively normal clinical and laboratory evaluations, making a specific etiologic diagnosis difficult (1). We have studied a large kindred with a myopathy clinically characterized by exertional myalgia and fatigue which we have designated familial myalgic myopathy.

Case Reports

This western West Virginia family traces its ancestors to Ireland and Great Britain through patient I-2 (Figure 1). Six affected family members over two generations were evaluated.

Patient II-2 is a 52-year-old woman who developed exertional fatigue and myalgias as a teenager. Steroids, non-steroidal anti-inflammatory agents, and muscle relaxants gave no relief. She also noted intermittent nausea, dyspepsia, and cramping pains in the flank and abdomen unrelated to activity.

At age 44, motor examinations and reflexes were normal.

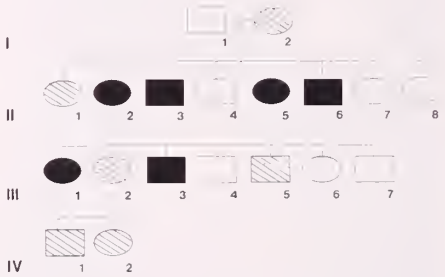


Figure 1. Family pedigree. Solid symbols represent affected members who were examined and biopsied. The hatched symbols denote those members affected by history, but not examined.

Creatinine kinase (CK) was 30 IU/L (normal 20-130). Serum T_4 was normal. Nerve conduction and repetitive nerve stimulation studies were normal. Electromyogram (EMG) demonstrated an increased proportion of polyphasic motor units and a few fibrillation potentials and positive sharp waves in several proximal muscles.

A lumbar paraspinal muscle biopsy specimen demonstrated predominantly histologically normal muscle with small areas in which there was moderate variation in fiber size and shape, internalized nuclei, occasional split fibers, target fibers, angular fibers, rare necrotic fibers, mild perimysial fibrosis, adipose replacement, and a few clusters of atypical-appearing cytoplasmic bodies. These cytoplasmic bodies had unusually large size and displayed a vermiform configuration (Figure 2). With hematoxylin and eosin (H-E) staining, they had an eosinophilic, hyaline appearance with a faint, clear halo surrounding them. They were reddish green to intensely red with the modified trichrome stain. They occurred predominantly in type II myofibers. No tubular aggregates were seen. A biopsy specimen of the vastus medialis showed similar features except for fewer atypical cytoplasmic bodies.

Over the next six years her symptoms were provoked by minimal exertion. At age 50, she had mild proximal weakness and normal reflexes. CK was 330 IU/L. Serum vitamin B_{12} was 350 pg/ml (normal 200-950). Serum folate was 14 ng/ml (normal 3-17). EMG was unchanged from the previous study.

Figure 2. Frozen section lumbar paraspinal muscle biopsy specimen from patient II-2 showing atypical-appearing cytoplasmic bodies. (H-E, x 420)

Patient II-3 is a 50-year-old man who developed exertional fatigue and myalgias in his mid-twenties. At age 28, he occasionally experienced episodic leg weakness. Eventually, his myalgias became constant, present with or without exertion. He quit his desk job at age 43 because of an inability to hold a pen for prolonged periods.

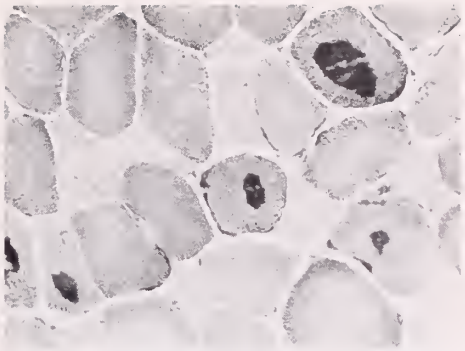
Neurologic examination at that time was normal. CK was 300 IU/L. A lumbar paraspinal muscle biopsy specimen demonstrated scattered areas with moderate fiber-size variation, internalized nuclei, split fibers, mild perimysial fibrosis, and angular, atrophic fibers. Rare ragged red and ring fibers were present. Numerous fibers contained atypical cytoplasmic bodies.

At age 46, muscle strength was normal. Post-exertional CK was 463 IU/L. Serum T_4 and TSH were normal. Nerve conduction studies were normal. In most muscles tested, EMG demonstrated an increased proportion of polyphasic motor units and a few fibrillation potentials. A biceps muscle biopsy specimen showed similar pathologic alterations except for fewer typical cytoplasmic bodies.

Some myofibers (predominately type II) contained subsarcolemmal and internal deposits of a granular material which stained basophilic with H-E, reddish green to red with modified trichrome, and dark blue with a nicotinamide adenine dinucleotide-tetrazolium reductase stain (NADH-TR) (Figure 3). These deposits were consistent with tubular aggregates. In addition, there were a few myofibers containing vacuoles rimmed with a basophilic granular material.

At age 47, potassium challenge did not provoke weakness.

Patient II-5 is a 47-year-old woman with exertional fatigue and myalgias in her lower extremities since childhood. By age 40, she had nearly constant muscle burning in her hips and thighs. Moderate exertion would cause her to be bedridden for several days. She has two daughters with similar complaints. At age 40, her strength was normal. CK was 48 IU/L. Nerve conduction studies were normal. EMG demonstrated a mild increased proportion of polyphasic units. Lumbar paraspinal muscle biopsy specimen was unremarkable.



rigure 3. Frozen section biceps muscle specimen from patient II-3 showing subsarcolemmal and central tubular aggregates. (NADH-TR, x 420)

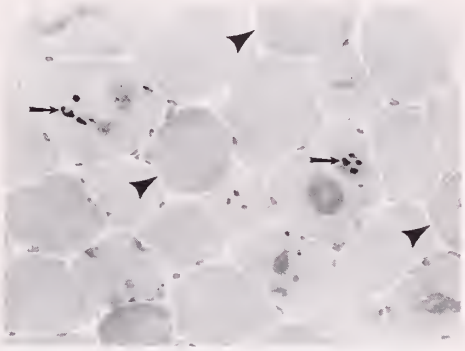


Figure 4. Frozen section biceps muscle biopsy specimen from patient III-1 showing concurrence of pathologic features including tubular aggregates, ring fibers (arrowheads), and cytoplasmic bodies (arrows). (H-E, x 420)

Patient II-6 is a 45-year-old man with a long history of exertional myalgias in the low back, hamstrings, and calves. Neurologic examination at age 42 was normal. CK was 97 IU/L. Nerve conduction studies were normal. EMG demonstrated an increased proportion of polyphasic motor units in one muscle. Biceps muscle biopsy specimen demonstrated minimal variation in fiber shape and size. Only three or four fibers in the entire specimen contained subsarcolemmal deposits consistent with tubular aggregates.

Patient III-1 is a 32-year-old woman with exertional fatigue, myalgias, and cramps affecting her back, legs, and arms since she was a teenager. She was unable to participate in physical education classes and could never do a situp. By age 26, her chronic fatigue and muscular aching were independent of exertion. She experienced intermittent sharp pains and cramps in her distal extremities. A moderate amount of exertion would leave her virtually prostrate for several days. In addition, she complained of frequent abdominal cramps, pain, nausea, vomiting, and bloating sensations. Mitral valve prolapse was diagnosed after an evaluation of intermittent nonexertional chest pain. Neurologic examination was entirely normal. Nerve conduction and EMG studies were normal.

Lumbar paraspinal muscle biopsy specimen demonstrated a few small areas with mild fiber-size variation, internalized nuclei, and atrophic, angular fibers. Typical cytoplasmic bodies and tubular aggregates were seen in only two myofibers.

By age 31, she also complained of stress incontinence, frequency, intermittent bladder pain, and worsening of her gastrointestinal symptoms. Muscle strength, sensation, and reflexes were normal, and plantar responses were flexor. Repeat EMG was normal. CK was 100 IU/L. An esophageal motility study demonstrated an increased duration of the proximal peristaltic wave, consistent with striated muscle dysfunction. Irritable bowel syndrome and gastroesophageal reflux were diagnosed. Cystoscopy showed a small bladder capacity and post-void urine residual was 200cc, consistent with a spastic neurogenic bladder.

Biceps muscle biopsy demonstrated mild variation in fiber size and a few internalized nuclei. Although the majority of the specimen was histologically unremarkable, a few small areas had numerous fibers (predominantly type II) containing tubular aggregates, ring fibers, and typical and/or atypical cytoplasmic bodies (Figure 4).

Patient III-3 is a 31-year-old man with muscle fatigue and nonexertional sharp, aching pain, especially in his upper extremities. He could never curl or bench press more than 35 pounds. Jogging one mile would exhaust him for several days. By age 24, he had almost constant myalgias in the cervical, interscapular, and lumbar areas. He also noted intermittent nausea, vomiting, and dyspepsia, much like patients II-2 and III-1.

Examination at age 24 was normal except for depressed reflexes. Nerve conduction studies were normal. EMG demonstrated a late component spike in one muscle. Lumbar paraspinal muscle biopsy specimen demonstrated mild fiber size variation, internalized nuclei, split fibers, and atrophic fibers. A small number of fibers contained atypical cytoplasmic bodies. A few fibers contained internalized capillaries.

Several unexamined family members reportedly suffered from similar exertional myalgias and fatigue. According to patient II-2, patients I-2 and III-2 are the weakest in the family. Patients IV-1 and IV-2, age 15 and 13 years, respectively, have had exertional fatigue and myalgias for several years.

Discussion

The examined family members had common clinical features. Their major symptoms were progressive exertional and resting muscular fatigue and myalgias, especially in the back and lower extremities. Neurologic examinations were normal except for mild proximal weakness in patients II-2 and depressed reflexes in patient III-3. No atrophy, fasciculations, myotonia, paralytic attacks, or true muscle fatigability were noted in any examined patient. There was no correlation between subjective complaints and objective findings.

Serum CK was normal in four of the six examined patients, although patient II-2 later had a value three times normal. Patient II-3 had a serum CK three to four times normal. Serum potassium and thyroxine values were normal in all, and patient II-3 had a normal potassium challenge test. EMG evaluation demonstrated mild myopathic and neurogenic alterations, except in patient III-1, who was normal on two separate occasions.

Muscle histopathology demonstrated myopathic and mild chronic neurogenic features, except in patient II-5 whose biopsy was entirely normal. All specimens had normal proportions of type I and type II myofibers. Myopathic features include internalized nuclei, fiber-size variations, split fibers, perimysial fibrosis and adipose deposition, ring fibers, and ragged red fibers. One patient, III-3, had rare internalized capillaries. Nearly all patients had some atrophic angular fibers. Four of the six patients had atypical-appearing cytoplasmic bodies, seen in predominantly type II myofibers. These had the staining characteristics of typical cytoplasmic bodies (2), but were unusually large and had a vermiform configuration. These atypical cytoplasmic bodies are probably a variation of classic cytoplasmic bodies (also seen in several of our patients). Approximately half of the muscle biopsy specimens had a few myofibers (predominantly type II) containing tubular aggregates, thought to be derived from the sarcoplasmic reticulum by unknown pathologic processes (3, 4).

"This family illustrates that genetic myopathies, in addition to acquired conditions, can have myalgia as the sole or predominant clinical feature."

Myoadenylate deaminase, myophosphorylase, and succinic dehydrogenase preparations were normal in all specimens.

One striking and characteristic feature of each muscle biopsy was the markedly uneven distribution of pathology. Although the majority of each biopsy specimen was histologically unremarkable, there were small interspersed areas of definite pathologic change. Another important characteristic was the variability of pathologic features, not only among the six examined family members, but also within each of the three patients who had more than one biopsy. The histopathologic variability seen among and within the examined patients from this family probably represents a biopsy sampling phenomenon. In all likelihood, if more tissue from multiple muscles was obtained, the numerous pathologic changes would be common to all. Histopathologic heterogeneity appears to be an important characteristic of familial myalgic myopathy.

The myopathy present in this kindred is similar to previously reported cases of individuals with prominent complaints of chronic muscle pain, little to no objective clinical or laboratory abnormalities, and certain non-specific pathological findings on muscle biposy. These findings include tubular aggregates, internalized capillaries, and myofiber type II predominance.

When an association between skeletal muscle tubular aggregates and sporadic cases of exertional malagias and cramps has been noted, the individuals typically had normal examinations or only mild proximal weakness despite disabling symptoms, normal or mildly elevated CK, normal EMG, and tubular aggregates as the predominant histopathological feature on muscle biopsy (5-10).

Pierobon-Bormioli et al. described a family with autosomal dominantly inherited slowly progressive weakness associated with lower extremity exertional myalgias, stiffness, and muscle cramps (11). Their patients had elevated serum CK, but the EMG was generally unremarkable. Tubular aggregates were present within both myofiber types, but other myopathic features were also present (11).

They concluded that the severity of the pathologic changes seemed unrelated to the degree of clinical weakness (11). It should be noted, however, that tubular aggregates have been found in almost 30 different neuromuscular diseases and thus are not pathognomonic for any specific disease or clinical setting.

Internalized muscle capillaries in type I myofibers, such as were seen in patient III-3, is a little-recognized pathologic feature which has been described in several neuromuscular disorders, particularly Becker muscular dystrophy, and a few patients with exertional myalgia (12). The pathological significance of internalized capillaries and their relationship to myalgia, however, is not clear. A report of 13 individuals with clinical features similar to that seen in our family demonstrated

type II myofiber predominance as the only significant pathologic abnormality (13). Type II myofiber predominance, however, is seen in other neuromuscular diseases, and may be secondary to chronic abnormal contractile activity (13).

This family illustrates that genetic myopathies, in addition to acquired conditions, can have myalgia as the sole or predominant clinical feature. Additionally, the muscle alterations seen in familial myalgic myopathy were strikingly heterogeneous and nonspecific.

Acknowledgements

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Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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President's Page

"We will lose by default on important issues if we cannot be heard."

Get Involved

Twenty-five years ago it was relatively simple to start a medical practice if one had completed the proper training to qualify for a license; that training was the completion of a rotating internship. Once a practice was to be opened, a small amount of office furniture, medical equipment and supplies were purchased, and liability insurance was procured from one of several companies at a reasonable cost. (My first year's premium for general practice was $63.) A secretary was hired and a physician could practice medicine without any annoyances except for the occasional time that was required to help the secretary fill out an insurance form.

Almost 100 per cent of the physician's time could be devoted to patient care. Not so today; now the post-medical school training required for privileges in most hospitals is a minimum of three years (with exceptions). The expense for technical office equipment and liability insurance is a tremendous investment, with many physicians already having a debt of $40,000 to $70,000 at the completion of their training.

But physicians now must deal with federal and state government, with health and liability insurance companies, with PPOs, HMOs and IPAs, all of whom want to tell them how to practice medicine for which physicians are trained and they are not.

Physicians today must devote a large portion of their time and energy to the business of medicine which reduces the efficiency of their medical practice, but they have no choice. That business of medicine not only includes the operation of the office and dealing with all of the regulatory agencies, but also necessitates their being a part of organized medicine. When I say to be a "part of organized medicine," I refer not only to the specialty groups to which most of us already belong but specifically to the local societies, and the state and national associations. It is no longer a matter of just paying the dues and waiting for something to be done in return—it is a matter of getting involved.

Involvement in an organization such as the West Virginia State Medical Association means volunteering for committee work, attending and supporting the organizational meetings and, most of all, by being politically active. That activity means being supportive of WVSMA's legislative efforts by lobbying on our behalf on a voluntary basis, by talking to your patients on the political issues, and by standing up and voicing your opinion.

A consensus is needed to reach our goals. We will lose by default on important issues if we cannot be heard. One physician has a soft voice; many physicians have a loud voice. Become involved, stay informed and shape the future by uniting under common goals of your professional organization. We cannot turn back the clock 25 years, nor would we want to; those days are gone forever, but with your involvement we can be a political force and a loud voice on the issues that face medicine today.

—Bill M. Atkinson, M.D.

RCTs

Nursing organizations have been trying to make a cause celebre out of the RCT proposal. Doctors in any position of leadership in the State have been inundated with mail, mostly form letters, protesting the AMA's initiative to create a new category of health worker—Registered Care Technician. Let's hope it has done them some good. There is certainly nothing we want to fight about with nurses.

It all started in June at Chicago. There, the AMA House of Delegates passed a resolution authorizing the Association Board of Trustees to seek out two demonstration areas someplace in the country in which to test the feasibility of developing a Registered Care Technician system. It doesn't sound like, and never was, a devious scheme to denigrate nurses and subvert the power and authority of organized nursing. The problem was, and remains, that many parts of the country have experienced a shortage of nursing personnel of desperate proportions. Patients could not be cared for and entire wings of hospitals were being closed.

It wasn't a sudden or an unexpected phenomenon. In many ways it was very predictable. Diploma schools of nursing were being phased out and training times for nurses to attain graduate degree status was necessarily being extended. Fewer candidates for nursing training were qualified or even interested.

Nurses are certainly correct when they point out that the complex and sophisticated duties expected of today's nurses require exceptionally well-qualified and extremely well-trained nurses. The only problem seems to be that along with the requirement for technical abilities and sophisticated care from highly trained nurse specialists there remains the old-fashioned requirement for the care of more mundane human needs.

RCTs are the AMA's proposal for meeting these needs. Professional nursing organizations have no proposals for meeting such needs other than the plea to "help us attract more nurses into training."

Our plea is, "Let's all give RTCs a look and see how good or how bad the proposal is." That is what the AMA resolution was all about—two demonstration projects—in the whole country. If it is a rotten idea, Nursing has nothing to fear. If it is a good idea, we all have something to gain, particularly those of us who become ill.

Organized Nursing has needed some rallying cry. Their organized numbers are thin. We wish them no ill fortune in their organizing efforts. But their efforts in this instance are based on a premise a little bit too thin. Doctors and their plans to help patients are not the enemy. Nurses and their plans are not our enemy. We don't want to fight. Honest!
—SDW

Children's Inn at NIH

Children who are patients at the National Institutes of Health (NIH) took a break from their medical treatment to participate in this summer's groundbreaking for the Children's Inn at NIH. The ceremony was held at the future site of the Inn, which will be built on the Bethesda, Maryland, campus of the national biomedical research center, near the Warren G. Magnuson Clinical Center. The Inn, scheduled for completion next summer, will house families of children being treated in research programs at the NIH.

The friends of The Children's Inn at NIH, a volunteer group headed by Washington attorney Carmala Walgren, has spearheaded the effort to build the residence facility. Merck & Co., Inc., the health products company based in Rahway, New Jersey, donated $2.3 million for construction costs. Washington builder Alan Kay, who also serves on the Children's Inn Board of Directors, is supervising construction of the project *pro bono.*

The focus of the ceremony was on the children, who sang, spoke and wielded child-size shovels. Among the speakers was Brenda Small, an 18-year old from Washington, D.C., who expressed the thanks of all the children and whose own story sounded a note of hope for them and their families. Ms. Small, who was brought to the NIH at age 11 suffering from a form of cancer others had termed "hopeless," is attending Johnson C. Smith College in Charlotte, N.C., this fall—on a basketball scholarship—and plans to become a doctor.

The Inn will have special meaning for the families of ill children, as Cindy White, of Scalp, Pennsylvania, speaking for the parents, affirmed. She "lives" at NIH for as long as a

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year at a time while her child receives treatment. Although one parent may stay in the child's hospital room, there are currently no provisions for other family members. When the child is an outpatient, the child and family must stay in area motels or private residences, located with the help of NIH social work staff.

Calling the Children's Inn "a place of healing—a place of hope," P. Roy Vagelos, M.D., Chairman and Chief Executive Officer of Merck, praised the "visionaries" who "dreamed of a place of warmth, with toys and fun, where children could go at the end of a taxing day," and made that vision a reality.

William F. Raub, Ph.D., Deputy Director of NIH, said: "The Friends of The Children's Inn could just as well be called the Family of The Children's Inn. Members of Congress and the research community, parents and private industry all have formed a partnership—a family—focused on the goal of all families, that children grow up to lead healthy and productive lives."

The Children's Inn is the realization of an idea conceived some years ago by parents of children being treated at NIH, by Randy Schools, head of recreation and welfare for NIH, and by Philip A. Pizzo, M.D., chief of the pediatric branch and head of the infectious diseases section of the National Cancer Institute, who spoke on behalf of the Friends of Children's Inn. They were joined last year by Ms. Walgren, who headed a group that included members of Congress and their spouses, NIH representatives and community leaders, in actively planning and working for the new facility.

The Inn will house 36 families at any one time and several hundred during the year. The quarters are family-like, with common areas for cooking, dining and recreation. Doctor Pizzo expects that the new facility, which will be maintained by NIH, will be large enough to meet the needs of all the children under treatment.

NIH also made available the two-acre wooded site for the Inn, which is near Warren G. Magnuson Clinical Center where each year some 1,300 children undergo treatment for cancer, AIDS, heart disease, asthma and neurological and other disorders.

Children from all over the United States and the world come to the national research center to receive investigational medicines and therapies not available elsewhere. The length of stay varies with the child's condition and the outcome of treatment, and can range from a few days to six months, as inpatient or outpatient, or, frequently, a combination of the two.

"It's very uncomfortable for the families," said Ms. Walgren. "There's no place to prepare food or do laundry. The children may be ill from their treatment, and hotels are not always happy to house sick children, many of whom are coping with the side effects of chemotherapy. There is such a need for a place like Children's Inn."

Friends of Children's Inn, headed by Ms. Walgren, will seek donations from the general public, foundations and corporations to furnish the facility once construction is completed. Contributions (which are tax deductible) may be sent to Friends of The Children's Inn at NIH, Building 31, Room B1W30, Bethesda, Maryland 20892.—*Guest Editorial by Friends of The Children's Inn at NIH.*

Bill M. Atkinson, M.D., Assumes Presidency at Annual Meeting

Bill M. Atkinson, M.D., of Parkersburg has assumed duties as the new President of the West Virginia State Medical Association. (See photos on Pages 449 and 468.)

Doctor Atkinson was installed as President by Dr. Cordell A. De La Pena of Clarksburg, the retiring President, at the concluding session of the House of Delegates Saturday, August 20, during the 121st Annual Meeting of the Association in White Sulphur Springs at the Greenbrier.

Doctor Atkinson, a surgeon, is a member of the staff of Camden Clark Memorial Hospital in Parkersburg where he is a past President of the staff and past President of the Executive Committee. He also is a staff member and past President of the staff at St. Joseph's Hospital in Parkersburg.

Convention activities began with a meeting of the Executive Committee on Tuesday, August 16.

Other New Officers

Doctor De La Pena presided at both House sessions. He automatically became Chairman of the Council for the new Association year, succeeding Charles E. Turner, M.D., of Huntington.

Chosen President Elect was Derrick L. Latos, M.D., Wheeling nephrologist, who will be installed as President during the 1989 Annual Meeting in White Sulphur Springs at the Greenbrier.

Michael M. Stump, M.D., of Elkins was elected Vice President.

Reelected Treasurer was William C Morgan, Jr., M.D., Charleston otolaryngologist.

Harry S. Weeks, Jr., M.D., of Wheeling withdrew his name for reelection as AMA Delegate, thereby moving into that post the senior Alternate Delegate, Stephen D. Ward, M.D. (effective January 1, 1989, at the expiration of Doctor Weeks' term). Council will appoint an AMA Alternate to replace Doctor Ward for the June, 1989, AMA meeting, with election of the AMA Alternate to be held during the 1989 Annual Meeting. Drs. John B. Markey of Charleston and Joseph A. Smith of Dunbar are WVSMA's other two AMA Delegates.

The other two AMA Alternate Delegates are Drs. David Z. Morgan, Morgantown, and Carl J. Roncaglione, South Charleston.

Council Members

Roger E. King, M.D., of Morgantown was newly elected to Council, replacing Michael T. Hogan, M.D., also of Morgantown; and William C. Revercomb, Jr., M.D., of Charleston was elected to his first two-year term, having been appointed to fill the unexpired term of Echols A. Hansbarger, Jr., M.D., who resigned due to ill health.

President Atkinson has named Gary G. Gilbert, M.D., Huntington, as an additional Councilor in District IX (Mason, Putnam, Cabell, Lincoln and Wayne counties) because of membership growth. He will serve until the 1989 Annual Meeting when Councilors from odd-numbered districts will be elected.

Derrick L. Latos, M.D.
President Elect

He also has named Karl J. Myers, M.D., of Philippi, as Councilor in District V (Taylor, Barbour, Tucker and Randolph counties) to serve the unexpired term of Doctor Stump, who was elected to the vice presidency. Doctor Myers will be eligible for election to his first two-year term as a Councilor from that District (an odd-numbered District) during the 1989 Annual Meeting.

Physicians reelected to Council were:

Paul E. Frye, Fairmont; Michael J. Lewis and Thomas S. Clark, Morgantown; Larry C. Rogers, Petersburg; James L. Bryant, Clarksburg; Porfirio R. Pascasio, Weston; Jean P. Cavender, Constantino Y. Amores and Warren Point, all of Charleston; Rodney L. Stephens, Logan; and Stephen L. Sebert, Lewisburg.

Holdover Councilors whose terms will expire in 1989 are:

Drs. Jasbir S. Makar, Weirton; James L. Comerci, Wheeling; James D. Helsley, Berkeley Springs; Michael A. Morehead, Parkersburg; Mel P. Simon, Point Pleasant; Robert W. Lowe, Huntington; William C. Covey, Jr., Beckley; and David F. Bell, Jr., Bluefield.

Under the terms of the Constitution, Doctor Turner, the Council Chairman last year, becomes Councilor-At-Large for 1988-89; and David Z. Morgan, M.D., Morgantown, the WVSMA President three years removed, will serve as Junior Councilor during the period.

Amendments, Resolutions

The House adopted a Bylaws amendment providing for the organization of a hospital Medical Staff Section within the framework of the WVSMA, and received proposed amendments to the Constitution and Bylaws which, because of the Constitutional amendments, must lie over for one year to be

voted upon during the 1989 Annual Meeting.

The proposed amendments deal with:

- Deletion of the word, "honorary," which inadvertently was overlooked when in 1987 an amendment was passed to eliminate the category of honorary membership; and the addition of an Associate Membership category.
- Description of privileges and benefits of Associate Membership.
- Clarifying the question of who has a right to vote in the House of delegates.
- Avoiding conflict of interest of members of the Judicial Commission by limiting membership to members who hold no other office or position in the Association.
- Changing the two-year terms of office of WVSMA Delegates and Alternates to the AMA so that they may begin immediately following the WVSMA Annual Meeting, at the time of election, rather than their having to wait until January 1 of the following year.
- Adding to the Association's Standing committes an Audit Committee which is ongoing from year to year to oversee the financial workings of WVSMA.

The full text of the Bylaws amendment adopted and the proposed Constitution and Bylaws amendments appears elsewhere in this issue of the *Journal*.

From 28 resolutions originally introduced by county societies and individual physicians, 15 were adopted, with the Resolutions Committee consolidating many of the similar resolutions; i.e., uncompensated care, mandatory assignment, malpractice, tort reform, etc., into substitute resolutions.

Some of the resolutions which were adopted addressed a voluntary, physician-sponsored program under which members agree to accept Medicare assignment for professional services to low-income elderly; reactivation of the Nursing Liaison Committee; further tort reforms including elimination of frivolous suits and immunity from punitive damages; and the WVSMA lobbying effort. The full text of resolutions adopted also appears elsewhere in this issue of the *Journal*.

President Atkinson, a native of Roane County, is certified by the American Board of Surgery and the American Board of Quality Assurance and Utilization Review Physicians, and is a Fellow of the American College of Surgeons.

Doctor Atkinson was a member of the WVSMA Council in 1984-85, Vice President in 1986-87, and President Elect in 1987-88. He was President of the Parkersburg Academy of Medicine in 1983.

He was graduated from Glenville State College, received his M.D. degree in 1965 from West Virginia University School of Medicine, and interned at Memorial Hospital in Charleston in 1965-66.

Doctor Atkinson was in general practice in Spencer in 1966-67, and then completed surgical residencies at Beckley Appalachian Regional Hospital and Memorial Hospital in Charleston from 1967 to 1971.

He is a member of the West Virginia Chapter, American College of Surgeons; American Medical Association, Southern Medical Association, and Association American Academy of Medical Directors.

President Elect

Doctor Latos, the President Elect, is a native of Wheeling. He graduated from Wheeling College, and received his M.D. degree in 1972 from WVU School of Medicine. He interned at Vanderbilt University Hospital in Nashville Tennessee, and completed a nephrology fellowship and residency in medicine there and at the Veterans Administration Medical Center in Nashville.

Doctor Latos was a recipient of a WVSMA scholarship to WVU School of Medicine in 1968.

He has served on the WVSMA Council since 1981, and is a member of the Insurance Committee and the 1989 Annual Meeting Program Committee.

Doctor Latos, Clinical Professor of Medicine at WVU, was President of the medical staff at Ohio Valley Medical Center in 1985-86 and President of the Ohio County Medical Society in 1986-87.

AAFP: Sports

Fourteen out-of-state physicians will join two state doctors on the faculty of the second annual West Virginia Chapter, American Academy of Family Physicians Weekend and Sports Medicine Conference.

The conference will be held December 2-4 in Huntington at the Radisson Hotel.

In addition to sports medicine, the meeting will focus on diabetics, infectious disease, C.O.P.D., asthma, and hormonal changes in women.

Sponsors are the Family Medicine Foundation of West Virginia, the Marshall University Department of Family Practice and Community Health, and the Division of Sports Medicine, MU School of Medicine.

Faculty

The faculty will include Drs. Julian Bailes, Team Physician, St. Joseph Hospital and Medical Center, Barrow Neurological Institute, Phoenix Arizona; Richard S. Beaser, Senior Staff Member, Joslin Diabetes Center, and Instructor in Medicine, Harvard Medical School; Richard M. Bergenstal, Adult Endocrinologist, Park Nicollet Medical Center, and Associate Director, International Diabetes Center, Minneapolis;

K. Douglas Bowers, Team Physician, West Virginia University, Morgantown; John J. Brems, Professional Staff, Section Adult Reconstructive Surgery, Department of Orthopaedic Surgery, Cleveland Clinic Foundation; Richard B. Brown, Chief, Infectious Disease Service, Baystate Medical Center, Springfield, Massachusetts; Dan E. Carr, Orthopedic Consultant, MU Athletic Team;

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Gregory Owens, University of Pittsburgh; Peter A. Schwartz, Department of Obstetrics and

Medicine, CME

Gynecology, Reading Hospital and Medical Center, Reading, Pennsylvania, and Terry Yamauchi, Chief, Pediatric Infectious Disease, and Professor of Pediatrics, Arkansas Children's Hospital, Little Rock;

Olympic Gold Medalist

Nancy Hogshead, olympic gold medalist - swimming, Jacksonville, Florida, and Rebecca Bowles Jones, R.N., B.A., B.S.N., Director, Staff Development, St. Margaret's Hospital, Montgomery, Alabama.

Program Directors are Drs. Ross Patton, Division of Sports Medicine, and Assistant Professor, Department of Family and Community Health, MU, and Jose Ricard, Huntington, President, West Virginia Chapter, AAFP.

The program is approved for 15 AAFP prescribed hours and for 15 hours toward the AMA Physician's Recognition Award. AOA credit toward category 2-D for 15 hours also is approved. AOA individual certificate forms will be available.

For registration and additional information, call West Virginia Chapter, AAFP, (304) 776-1178 or CME Director, MU School of Medicine, (304) 696-7018.

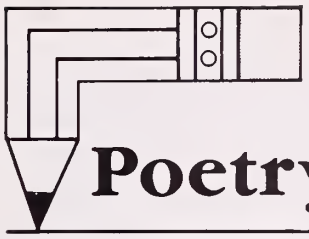
Office Managers Plan Conference

The Office Managers Association of Health Care Providers will hold its second Annual Conference November 4-5 at the Holiday Inn in Parkersburg. The conference is open to any office manager or administrative assistant of a health care facility.

The two-day program will focus on hiring and firing legalities, communication skills, marketing a medical practice, and learning how to survive running a busy medical office and home at the same time.

The organization now has 78 active members, with a mailing list of 130 offices. There are chapters in Charleston and Fairmont, with new chapters expected soon in Huntington, Beckley and Wheeling.

For complete details, contact the conference Chairman, Dian White of Charleston, at 342-1129.



Poetry Corner

Red Man

E're white man came to this fair land
The Indian called it home.
From either ocean's glistening sand
To mountain's highest dome.

The forest dense he searched for game,
Or fished the river wide.
And hunted buffalo on the plain
For meat and for the hide.

He trapped for furs and ate the meat,
And slept beneath the sky.
The skins he wore upon his feet
He did not need to buy.

He roamed the forest near and far
On foot or pony back,
And took direction from a star,
Or followed big game track.

Then the white men came to claim the soil,
Though Indians they must fight,
And tilled the land with endless toil
From morn till dark of night.

They built a land from east to west
At cost of life and limb,
And taught the Indian what was best,
Then took his land from him.

They placed him on a plot of land
Where he was told to stay;
A reservation carefully planned
Where he could work and play.

But freedom he no longer had,
And bitterness took sway
To force him into deeds most sad,
His life no longer gay.

So blame the red man if you must
For what was forced on him,
When white men came to stir the dust
From plain to mountain rim.
But give him now his well-earned right
As brother and as friend.
Help bring his isolated plight
At last to happy end.

E. Leon Linger, M.D.
Buckhannon

Leaves

Leaves are better raked when they are wet.
This may come as no surprise
To you guys
Who spend the fall
Under tall oaks and shagbark hickories.
But my wife rakes our leaves.
She believes the exercise
Will keep her young,
And it does, too.
Don't let me catch you
Telling her anything differently.
But today I raked in early morning.
A heavy fog without warning
Had settled on the hills,
And I found the leaves damp
Not soaking wet,
And I could tramp
Them into smaller piles for carrying.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

Competitors Wanted For Medicine Games

The 1989 World Medicine Games will be held in Montreal in July. Strong United States participation is sought in the numerous sporting events planned: judo, swimming, track and field, tennis, cycling, soccer, golf, etc. The top three athletes in each category will be honored with gold, silver and bronze medals, respectively.

Physicians are invited to compete. For more information, contact Robert Henry, Director of Communications, The 1989 World Medicine Games, Montreal, (514) 866-2053.

8-'88: WVSMA Holds . . .

▲ Drs. Henry M. Hills, Jr., left, Charleston, and William L. Neal, Huntington, honored as 50-year medical school graduates.

▲ Joseph E. Geenen, M.D., Milwaukee, Wisconsin, speaker on "Endoscopic Therapy of Biliary and Pancreatic Disease."

▼ Delegates hurriedly pick up resolutions prior to House session.

▲ D. Verne McConnell, M.D., left, Wheeling, and James L. Griffith, J.D., Philadelphia, spoke on medical liability

. . . 121st Annual Meeting

▲ The opening Thomas L. Harris Address was given by John J. H. Schwarz, M.D. (second from left), Battle Creek, Michigan, a Michigan state senator. Greeting him following his talk are, from left, Drs. James L. Bryant, Clarksburg; and Carole B. Boyd and Ralph W. Ryan, both of Morgantown.

and insurance during the second general session.

▼ Drs. James E. Davis, left, AMA President, who addressed the House of Delegates, and Cordell A. De La Pena, Clarksburg, 1987-88 WVSMA President.

▲ Governor Arch A. Moore, Jr., spoke to the House of Delegates

▲ New WVSMA President Bill M. Atkinson, M.D., Parkersburg, and his wife, Carolyn, on the evening of his installation August 20.

▼ Some of the more than 50 exhibits which attracted physicians and others throughout the convention.

Avoiding Liability

State AIDS Medical Testing, Records Confidentiality Act

Editor's Note: The following interpretive article was written at the request of WVSMA's Council for the information of members by Don R. Sensabaugh, Jr., the Association's legal counsel, and Steven L. Thomas, both with the law firm of Kay, Casto & Chaney, Charleston.

This article analyzes the AIDS-related Medical Testing and Records Confidentiality Act ("the Act"), passed by the West Virginia Legislature in 1988, which took effect September 1, 1988, from the perspective of health care providers and facilities. The Act defines "health facility" to mean a hospital, nursing home, clinic, blood bank, blood center, sperm bank, laboratory or other health care institution. The term "health care provider" is defined to mean any physician, nurse, paramedic, psychologist or other person providing medical, nursing, psychological or other health care services of any kind.

Generally, the Act is loosely written. Some aspects of the Act may be subject to differing intrepretations. In fact, some portions of the Act appear to contradict other portions. For those who may be subject to liability for failure to comply with the Act, this presents some difficulties. However, due to the efforts of the West Virginia State Medical Association, and especially Dr. Michael Stump, the Act is considerably better than the original legislation which was vetoed by Governor Moore.

Consensual, Nonconsensual

The recommendations contained herein are based on a conservative reading of the Act (that is, to minimize the potential for liability). Although there is no fail-safe method to prevent people from filing lawsuits, following these recommendations should minimize the possibility of losing such a lawsuit.

The Act provides for HIV testing in two broad circumstances—consensual and nonconsensual. The Act generally provides that the subject of HIV testing must consent to such testing except in the situations otherwise specifically defined. Because obtaining the patient's consent pursuant to the Act will foreclose one aspect of liability, those considering testing for HIV should always attempt to obtain the patient's consent.

The act provides a simple procedure for obtaining the needed consent. The State Department of Health is charged with the responsibility of preparing a written booklet containing information appropriate to obtaining informed consent. The person ordering the HIV test must distribute this booklet to the proposed subject in advance of the test. *Always check to be sure the patient can read.* In the event the subject is unable to read the booklet, alternate means of obtaining informed consent must be used. Also, in the event that a person lacks legal capacity or is mentally incompetent, consent must be obtained from the person empowered to make decisions on the patient's behalf.

As of this date, the State Health Department has not completed preparation of the booklets referred to in the Act. A spokesperson for the Department has indicated that the booklets will not be completed until October 1, 1989, at the earliest. Until the booklet is available, physicians obtaining consent from patients for HIV testing must fully document that the patient has been informed of the matters contained in the Act. A sample consent form is available from the West Virginia State Medical Association.

The Act provides that consent may be given orally or in writing. To preclude disputes, the person conducting the HIV test should always obtain written consent. The Act provides that the patient may withdraw consent at any time prior to drawing the sample for the test.

Persons consenting to an HIV test have the right to remain anonymous. In the event that a health care provider does not provide HIV testing on an anonymous basis, such provider should refer the proposed subject to a test site which does provide anonymous testing.

When Consent Not Required

The Act provides that consent is not required for HIV testing in the following circumstances:

1. Persons donating organs, blood or semen where the purpose of the test is to assure the medical acceptability of the gift;
2. In a *documented* bona fide medical emergency when the subject of the test is unable to grant or withhold consent and the test results are necessary for diagnostic purposes to provide appropriate emergency care (note that treatment cannot be withheld pending test results);
3. HIV testing purely for research purposes, if the procedure for conducting the test omits the identity of the subject, and such identity may not be retrieved by the researcher.

This third exception, which allows HIV testing if the name of the subject is disassociated from the test results, *may* allow health care providers to conduct random sampling for HIV. This would provide some basis for estimating the current level of risk presented by HIV to the public. However, the Act also provides that the Director of the Department of Health may obtain specimens for HIV testing for research or epidemiological purposes without consent if all personal identifying information is removed from the specimen prior to testing. Clearly, the State Health Department could undertake the responsibility of random sampling

to estimate public risk with less fear of repercussions. However, whether it will undertake such testing remains to be seen.

Mandatory Testing

In addition, the act provides for mandatory testing in certain circumstances. Any person convicted of prostitution or of sexual assault, sexual abuse or molestation shall be tested for HIV. Also, the Director of the State Health Department may require HIV testing in the following instances:

1. For the protection of a person exposed to HIV-infected blood or body fluids in connection with the rendering of emergency aid or as a mortician;
2. Persons believed to be HIV infected because of medical or epidemiological information, including, but not limited to, information that the subject is an intravenous drug user or a person with a sexually transmitted disease.

Confidentiality

A separate area which raises the potential for liability is in maintaining the confidentiality of HIV test results. The Act specifically defines that HIV test results may not be disclosed except to certain specifically identified persons. Those persons are:

1. The subject of the test;
2. An authorized agent or employee of a health facility or health care provider which is authorized to obtain test results (apparently the facility or provider to whom consent to test was conveyed);
3. Other licensed medical personnel providing care to the subject where knowledge of the test results is necessary to appropriate care;
4. The United States Public Health Service, Center for Disease Control, in connection with reporting requirements for diagnosed cases of AIDS;
5. Health care facilities procuring blood donations, semen and body parts for transplanting or from deceased persons;
6. Oversight review organizations conducting program monitoring, evaluation or service reviews;
7. Persons to whom the subject executes a written release of test results (the release must be signed and dated, and the effective time period for the release must be specified);
8. Persons given access to the test results by Court Order.

In addition, the Act allows a physician to enter an HIV-related illness on a patient's hospital or office chart.

Written Statement

The Act requires that a written statement be furnished to persons in categories numbered 7 and 8 above. However, given potential liability, prudence suggests that this written statement be given to any person to whom test results are disclosed other than the subject. The following written statement is contained in the Act and should be used when disclosing HIV test results:

> *This information has been disclosed to you from records whose confidentiality is protected by State law. State law prohibits you from making any further disclosure of it without the specific written consent of the person to whom it pertains, or is otherwise permitted by law. A general authorization for the release of medical or other information is not sufficient for this purpose.*

The Act provides one caveat with regard to release of HIV test results. The sex partners of, or persons who have shared an intravenous needle with, persons who have tested positively for HIV, may be contacted and advised that they may have been exposed to HIV. However, the name of the person who may have infected them may not be disclosed. There is no duty to disclose this information to sex partners or persons sharing intravenous needles. However, if such persons are known and are not informed, the Act requires the State Health Department to be notified. To minimize liability, prudence suggests that any positive HIV test be reported to the State Department of Health.

The Act provides penalties for violation of its terms. For a wreckless violation of the Act, liquidated damages of $1,000 may be recovered, or actual damages, whichever is greater. In addition, attorneys' fees may be recovered. An intentional violation of the Act involves liquidated damages of $10,000 or actual damages, if greater, plus reasonable attorneys' fees. Because the Act provides that attorneys' fees may be recovered in addition to damages, particular care should be taken to minimize liability.

Privileged Information

In this respect, health care providers and facilities should undertake to strictly control the personnel who will become privileged to information concerning patients who test positively for HIV. Because incidental disclosure of test results by an employee to whom these results are released could involve liability on the part of the provider or facility, a procedure should be set up to control this information. Hospital staffs are encouraged to develop specific procedures for the release of HIV information including guidelines identifying health care individuals who "need to know" test results. In addition, the written notice described above should be distributed to all persons to whom test results are released.

In all instances, whether testing originated by consent or in some other manner, patients who test positively must be referred for counseling. Health care providers and facilities must be prepared to offer counseling or referral for counseling for coping with the emotional consequences of learning of the positive test result.

Also, the State Health Department has just prepared proposed regulations to implement the Act, which are currently being reviewed by the Association. These regulations, when adopted, will further define the duties of physicians.

(Continued on Next Page)

Conclusion

The AIDS-related Medical Testing and Records Confidentiality Act of 1988 imposed substantial burdens upon health care providers and facilities. To minimize liability, the Act should be interpreted as conservatively as possible. In this regard, health care providers and facilities should take the following steps:

1. Always attempt to obtain written consent from patients prior to HIV testing;
2. Make sure your patients can read the booklet supplied, and that they have the legal and mental capacity to consent;
3. Ask patients if they want the results to remain anonymous;
4. Do not release test results to anyone without credentials for such release;
5. Always give the written warning provided herein to anyone to whom test results are released (other than the subject);
6. Set up controls over internal release of HIV test results (ideally, one discreet person should coordinate this);
7. Report all positive HIV tests results to the State Health Department.

WVU, Charleston, Adds Nephrologist

Myra L. Chiang, M.D., has joined the faculty of the Charleston Division, West Virginia University Health Sciences Center as Assistant Professor of Pediatrics and Director of the Pediatric Nephrology Section. Prior to coming to Charleston, Doctor Chiang was Instructor in Pediatrics at Baylor where she completed her fellowship in pediatric nephrology. Doctor Chiang completed her residency in pediatrics at the City Hospital Center in Elmhurst, New York, and received her M.D. degree from the University of the East in the Philippines.

The addition of Doctor Chiang to the faculty will offer a service not previously available to children in West Virginia, WVU officials said, while enhancing the educational opportunities for resident physicians and medical students. In addition to her responsibilities in Charleston, she will hold a Pediatric Nephrology Clinic one day each month in Morgantown.

Doctor Chiang is looking forward to development of a statewide program for the diagnosis and treatment of children with renal problems, WVU said.

1988 officers and some of the councilors of the West Virginia Chapter, American College of Surgeons, are, first row, from left, Drs. Eric P. Mantz, Charleston, Second Vice President; Catalino Mendoza, Clarksburg, Councilor; Herbert Warden, Morgantown, Immediate Past President; Thomas Chang, Clarksburg, President, and D. Verne McConnell, Wheeling, First Vice President; second row, from left, Carl Kite, Wheeling, Councilor; Roger King, Morgantown, Secretary/Treasurer, and Walter Klingensmith, Beckley, Councilor; third row, from left, John Trenton, Kingwood, former Governor; James Durig, Wheeling, Past President; and Stanley Kandzari and Thomas Covey, both of Morgantown, Councilors.

Clarksburg Doctor 1988 Award Winner

Linwood D. Zinn, M.D.

Linwood D. Zinn, M.D., of Clarksburg was presented the A. H. Robins Company Physician Award for Community Service at the WVSMA Annual Meeting in August in White Sulphur Springs at the Greenbrier.

Doctor Zinn was instrumental in the merger of Union Protestant and St. Mary's hospitals into United Hospital Center in Clarksburg.

He was in the private practice of internal medicine and cardiology in Clarksburg from 1941 until his retirement in 1987, and also played a key role in establishing the Coronary Care Unit at St. Mary's Hospital in 1969.

The award winner does voluntary service for the local Salvation Army, and is a 32nd Degree Scottish Rite Mason and a member of BPO Elks. A graduate of Harvard Medical School and a World War II Navy veteran, his two sons, Lynwood D. and Stephen B., are physicians, and five maternal relatives followed the profession of medicine.

Doctor Zinn, who was selected as the 1988 recipient by the WVSMA immediate past President, Cordell A. De La Pena M.D., Clarksburg, is a past ruling elder and currently a member of the board of trustees of the First United Presbyterian Church in Clarksburg.

A native of Glenville, he is a graduate of Glenville State College.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Oct. 7-8, Diagnostic Ultrasound

Oct. 7-8, Pediatric Oktoberfest

Oct. 14, 9th Annual Ophthalmology Conference: Glaucoma Symposium

Oct. 15, 9th Annual Ophthalmology Conference: Scientific Sessions

Oct. 20-22, 14th Annual Hal Wanger Family Practice Conference*

Oct. 29, Occupational Medicine*

Oct. 29, Pat Tuckwiller Annual Scientific Seminar*

Nov. 4-6, Hypnosis Workshop

Nov. 19, Emergency Medicine*

*In conjunction with WVU football games

CAMC/West Virginia University, Charleston Division

Oct. 19, Faculty Research Day

Nov. 5, Sleep Disorders

Nov. 12, Trauma Seminar

Nov. 28, Oncology Guest Lecture: Treatment of Small Cell & Testicular Cancer

Dec. 2, Transplant Update: Diabetes in Transplantation

Dec. 12, Oncology Guest Lecture: Rectal Carcinoma, Management

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Oct. 27, Color Flow Doppler, G. G. Thakker, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—Oct. 6, Immunosuppressive Drugs in the Treatment of Arthritis, James E. Brick, M.D.
Oct. 27, Status of Streptokinase & Urokinase in Acute Myocardial Infarction, Abnash Jain, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Oct. 13, G. I. Update, Warren Point, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Oct. 19, Rashes (Part II of II), William Welton, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Oct. 4, Common Problems in Pediatric Orthopedics, Eric Jones, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Oct. 5, Dermatology Update, Kimberly Skaff, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Oct. 20, Update Diabetes, Steven Grubb, M.D.

Logan, • General Hospital, 11:30 A.M.—Oct. 21, Trauma Update, James Kessel, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Oct. 11, Management of Stroke, Glen Goldfarb, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Oct. 18, Organ Donation & Kidney Transplantation, Ernest Hodge, M.D.

Martinsburg, ★ V.A. Medical Center, 2 P.M.—Oct. 6, Borderline Personality Patient in the Medical Setting, Patton Van Nickell, M.D.

Montgomery, • General Hospital, 12 P.M.—Oct. 5, Oncology Update: Lung Cancer, J. Victorina Teleron, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Oct. 13, Central Pontine Myelinolysis

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Oct. 25, Update Eye Lasers Used in Surgery, Robert O'Connor, M.D.

Parkersburg, ★ Camden-Clark Hospital—Oct. 26, Alzheimers Disease, Robert Keefover, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Oct. 14, Oncology Update: Breast Cancer, Steven Jubelirer, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Oct. 28, Common Pediatric Illnesses, M.B. Ayoubi, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Oct. 18, Update on Common Skin Cancers, Nolan Parson, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Oct. 4, Update Infectious Disease, Elizabeth A. Funk, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Oct. 11, Review of Common Dermatologic Disorders
Oct. 25, Complications of Radiation Therapy

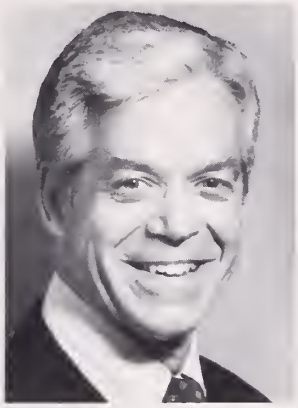
Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Oct. 26, Problems of the Breast, Daniel Foster, M.D.

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Oct. 18, Office Evaluation of Sexually Transmitted Diseases, Rashida A. Khakoo, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Oct 6. Update Hepatitis, Warren Point, M.D.

Cleveland Surgeon to Speak

'Mid-Winter' Program Forming



Caldwell B. Esselstyn, Jr., M.D.

A Cleveland Clinic surgeon will be among speakers for WVSMA's 22nd annual Mid-Winter Clinical Conference to be held January 27-29, 1988, in Huntington at the Holiday Inn-Huntington-Gateway.

Caldwell B. Esselstyn, Jr., M.D., will talk on "Reversal of Coronary Artery Disease: Fact or Fantasy?" during a conference session on "Surgery: A Changing Discipline." Two other speakers for the surgery session are to be announced.

Doctor Esselstyn is Head, Section of Thyroid and Parathyroid Surgery, Department of General Surgery, at The Clevelend Clinic Foundation.

Other subjects to be discussed during the conference will include occupational/industrial medicine, sociopolitical aspects of AIDS, and unstable miocardium, it was announced by William O. McMillan, Jr., M.D., Charleston, Chairman of the Program Committee.

Non-scientific discussion areas will be the relative value study, preadmission certification, and AMA's alternative to tort reform, he said.

The CME Workshop previously scheduled prior to the conference has been cancelled because of a conflict of dates with the national Alliance for Continuing Medical Education (ACME) Conference in San Francisco, Doctor McMillan added.

Doctor Esselstyn

Doctor Esselstyn also is Assistant Clinical Professor of Surgery at Case Western Reserve University, and is on the Governing Council of the American Association of Endocrine Surgeons.

Born in New York City, he was graduated from Yale University, and received his M.D. Degree in 1961 from Western Reserve University School of Medicine.

He interned and was a resident in general surgery at Cleveland Clinic Hospital, and was Senior Registrar with Professor Bryan Brooke, St. George's Hospital, London, England, from March to September, 1965.

Doctor Esselstyn served with the U.S. Army Medical Corps in 1966-68, including duty in Saigon and Chu Lai, Vietnam, receiving the Bronze Star, Vietnam Campaign, in 1968.

A past President of the Cleveland Surgical Society and the Cleveland Clinic medical staff, he received the Kiphuth Fellow Award from Yale University in 1982, and was Vice President of the American Association of Endocrine Surgeons in 1987.

Doctor Esselstyn is the author or co-author of some 114 scientific articles.

He was a member of the 1956 U.S. olympic team, and was awarded a Gold Medal in the Eight-Oared Rowing Event.

Registration

The conference registration fee is $75, with checks to be made payable to WVSMA and mailed to WVSMA at P.O. Box 4106, Charleston, WV 25364. There is no fee for residents, medical students and nurses. The fee for non-members is $100.

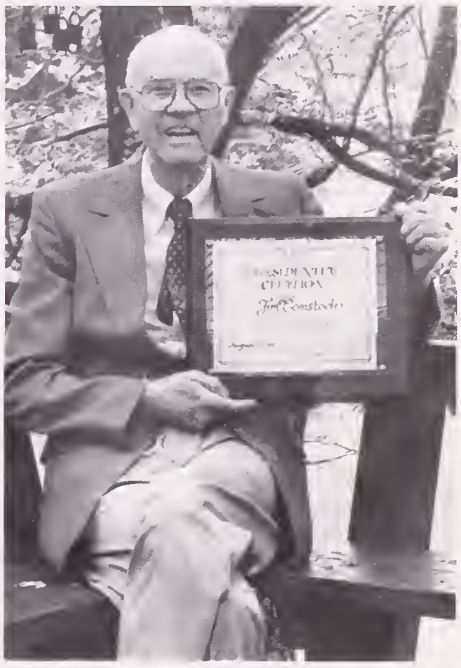
The Holiday Inn-Gateway is offering a special room rate of $52 (single or double). Specify WVSMA when making reservations to obtain the special rate. Physicians outside the Huntington area who register with WVSMA in advance of the Conference dates will receive a room reservation form for the Holiday Inn-Gateway. List "WVSMA" on the "group name" line.

For additional information, contact Mary Hamilton at WVSMA, (304) 925-0342 or 1-800-257-4747.

'Hillbilly' Editor Gets WVSMA Award

Jim Comstock of Richwood, Editor of The West Virginia Hillbilly and the News Leader, was presented the WVSMA Presidential Citation in August during the Annual Meeting in White Sulphur Springs at the Greenbrier.

The annual award recognizes contributions to health care by West Virginia lay citizens.



Jim Comstock, displaying his WVSMA lay citizen award.

Comstock has been a staunch defender of the medical profession and doctors in his newspapers through the years. In the 40s, he cajoled citizens into coming up with funds to save Richwood's old Sacred Heart Hospital, which had been condemned by the state's fire marshal.

During World War II he led a successful letter-writing campaign to defer a doctor from military service after the doctor, Richwood's only general practitioner, was drafted.

The Hillbilly regularly includes feature pieces on practicing doctors, and on pioneer doctors on the "Doctoring in the Hills" Page.

He has been called a "West Virginia legend" for his long and successful publication of the two weekly newspapers.

Some of the new officers of the West Virginia State Medical Association Auxiliary are shown above following the Auxiliary's 64th Annual Meeting held concurrently with the WVSMA Annual Meeting in August at the Greenbrier. Seated, from left, are Mrs. Sara Townsend (C. Vincent), Martinsburg, Vice President; Mrs. Ginny Reisenweber (Harvey D.), Martinsburg, President; and Mrs. Lois Spencer (Edward), Bluefield, President Elect; standing, from left, Mrs. Priscilla Stump (Michael), Elkins, Eastern Regional Director; Mrs. Helen Bell (David), Bluefield, Recording Secretary; Mrs. Astri Jarrett (Joe), Oak Hill, Treasurer, and Mrs. Sally Lowe (Robert), Huntington, Western Regional Director.

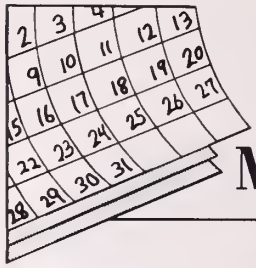
WVSMA Legislative/Leadership Conference in November, Charleston

The agenda for the Second Annual Issues '89 Legislative/Leadership Conference is being finalized as plans are under way to book Craddock Communications for media/spokesperson training and AMA representatives on congressional issues. The intent of the conference is to provide leadership training and to bring membership up to date on legislative and congressional issues. The conference begins at 9 A.M. Friday, November 18, and concludes by noon Saturday, November 19, at the Charleston House Holiday Inn.

Sensitivity training will be part of the media/spokesperson segment planned by Craddock Communications in Friday's session. The lecture segment is designed to be interactive with the limited number of participants. Please watch the *Journal* and WESGRAM for registration details.

A seminar on political involvement that covers the role of a legislative key contact and congressional and state issues will be conducted also on Friday, November 18. Participants will be limited to 50, for which preregistration is advised.

Saturday morning's segment will include panel speakers from AMA on Congressional issues and the newly-elected Governor of West Virginia, as well as other state legislative leaders.



Medical Meetings

October

3-6—AAFP, New Orleans.

3-7—Am. College of Chest Physicians, Anaheim, Calif.

8-12—Am. Academy of Ophthalmology, Las Vegas.

8-12—Am. Society of Anesthesiologists, San Francisco.

8-13—Am. Fertility Society, Atlanta.

12—CNA Second Generation Loss Control Seminar, Beckley.

13-16—Am. Society of Internal Medicine, Atlanta.

14-19—Am. College of Gastroenterology, New York.

16-18—6th Annual National Black Lung Conference, Charleston.

23-26—Medical Group Management Assoc., Kansas City, Mo.

30-Nov. 4—Am. Academy of Physical Medicine & Rehabilitation, Seattle.

November

6-9—Southern Medical Assoc., New Orleans.

12—Laser Surgery Seminar V, Charleston.

18-19—WVSMA Issues '89 Legislative/ Leadership Conference, Charleston.

December

2-4—WV Chapter AAFP Weekend & Sports Medicine Conference.

4-7—AMA Interim Meeting, Dallas.

1989

January

24-27—Southeastern Surgical Conference, Tarpon Springs, Fla.

27-29—22nd Mid-Winter Clinical Conference, Huntington.

February

9-14—Am. Academy of Orthopaedic Surgeons, Las Vegas.

March

19-24—Am. Assoc. of Immunologists, New Orleans.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

Quorum and Ricoh
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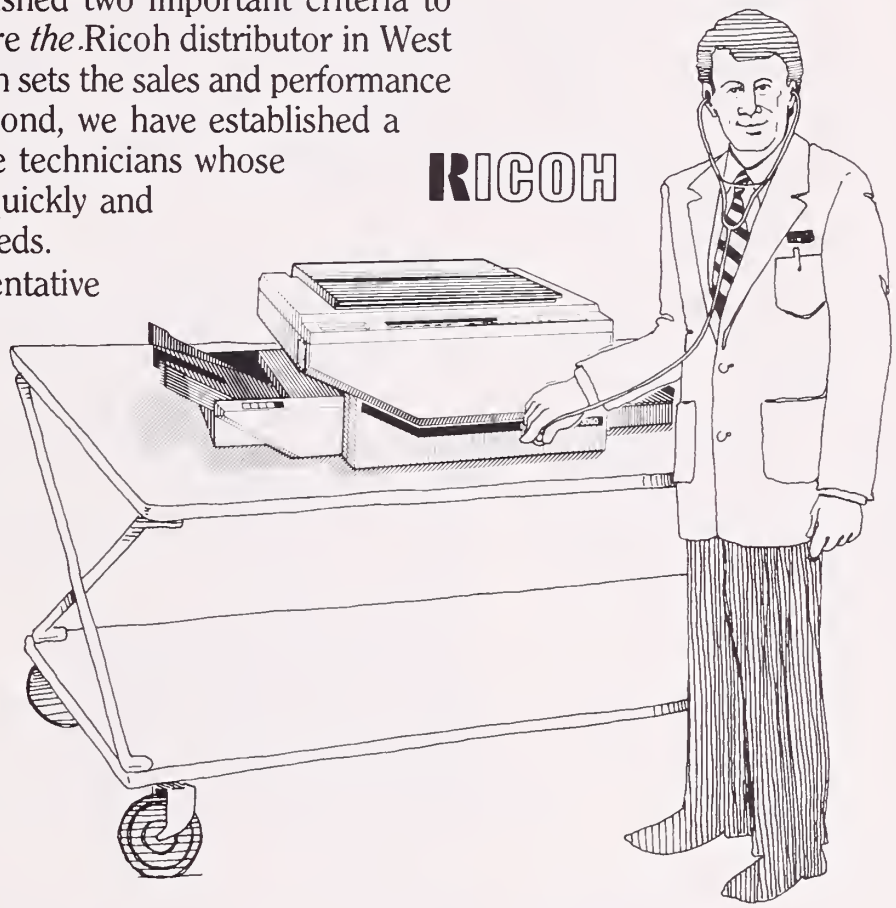

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

New Otolaryngology, Anatomy Chairmen

Two chairmen have been appointed to head departments in WVU School of Medicine. Stephen J. Wetmore is the new Chair of Otolaryngology and Richard C. Wiggins is Chair of Anatomy.

Doctor Wetmore, formerly Vice Chair of Otolaryngology and Maxillofacial Surgery at the University of Arkansas, is known for his work in speech rehabilitation, cancer of the head and neck, and laser therapy.

He received a medical degree from the University of Michigan, completed a general surgery residency at Kaiser Foundation Hospitals in Los Angeles, and an otolaryngology residency at the University of Iowa.

He joined the Department of Otolaryngology and Maxillofacial Surgery at the University of Arkansas in 1977, and became Vice Chair of the Department in 1983. He has received numerous teaching awards in otolaryngology and a certificate of honor from the American Academy of Otolaryngology in Head and Neck Surgery.

He is a Fellow of the American College of Surgeons, the American Academy of Otolaryngology/Head and Neck Surgery, and the Triological Society.

Formerly in Texas

Doctor Wiggins was formerly Associate Professor of Neurobiology and Anatomy at the University of Texas Medical School in Houston.

He received a doctorate in anatomy from Duke University, and held an NIH Predoctoral Fellowship and an NIH Genetics Program Traineeship.

His research has focused on investigations of the brain and nervous system including nutritional deprivation, drug interactions and neurochemical studies.

He held a Research Career Development Award from NIH for metabolic studies of abnormal brain myelination.

At the University of Texas he led efforts to develop a graduate program in neurosciences and later coordinated graduate studies for the departments of Neurobiology and Anatomy where he was recognized for teaching excellence.

He is the author or co-author of numerous publications, including a book, *Developmental Neurochemistry,* published in 1985.

Salmonella More Likely in Soft Egg

Last Spring, the news media warned the public of the possible risk of salmonella poisoning from eggs.

Salmonella is a bacterium which causes symptoms of nausea, vomiting and diarrhea. In the elderly or very ill, it can be fatal.

Much of the publicity originated from a report published in the *Journal of the American Medical Association,* based on research conducted at the Center for Disease Control in Atlanta.

The article reviewed the occurrence of salmonella poisoning in the Northeast and targeted eggs as being carriers of the bacteria. By collecting eggs from egg-processing plants throughout the country, the scientists were able to establish that the contaminated eggs originated from a single plant in the Northeast.

As a nutritionist, I am concerned about this type of bad publicity because eggs are an excellent source of nutrients, principally protein, whether consumed as a main component of a meal or in a great variety of recipes.

Should Eggs be Eliminated?

Should people consider eliminating eggs from their diet in an effort to avoid salmonella poisoning?

To address some of the concerns, I contacted Glenn Carpenter, a poultry specialist with the WVU Extension Service. According to DoctorCarpenter, eggs can be contaminated with salmonella bacteria in several ways.

Salmonella is most commonly found in foods due to external contamination (for example, by dirt) caused by poor handling.

In a typical plant, eggs are subjected to several rinse cycles as well as visual inspections before they are packaged. However, it is possible that undetected cracks are present in the shell, and the egg may be contaminated through the cracks.

Even an intact egg can become contaminated. Egg shells are porous. If one of the rinses or some of the equipment used in handling the egg has picked up the salmonella organism, contamination could occur by absorption through the shell.

In addition, Carpenter said, it is possible for an egg to pick up the salmonella organism during the final stages of its development in the reproductive tract of the hen.

Despite such hazards, several procedures exist and others are being developed to reduce the possibility of salmonella contamination of eggs at processing plants.

In the meantime, the public can take certain precautions.

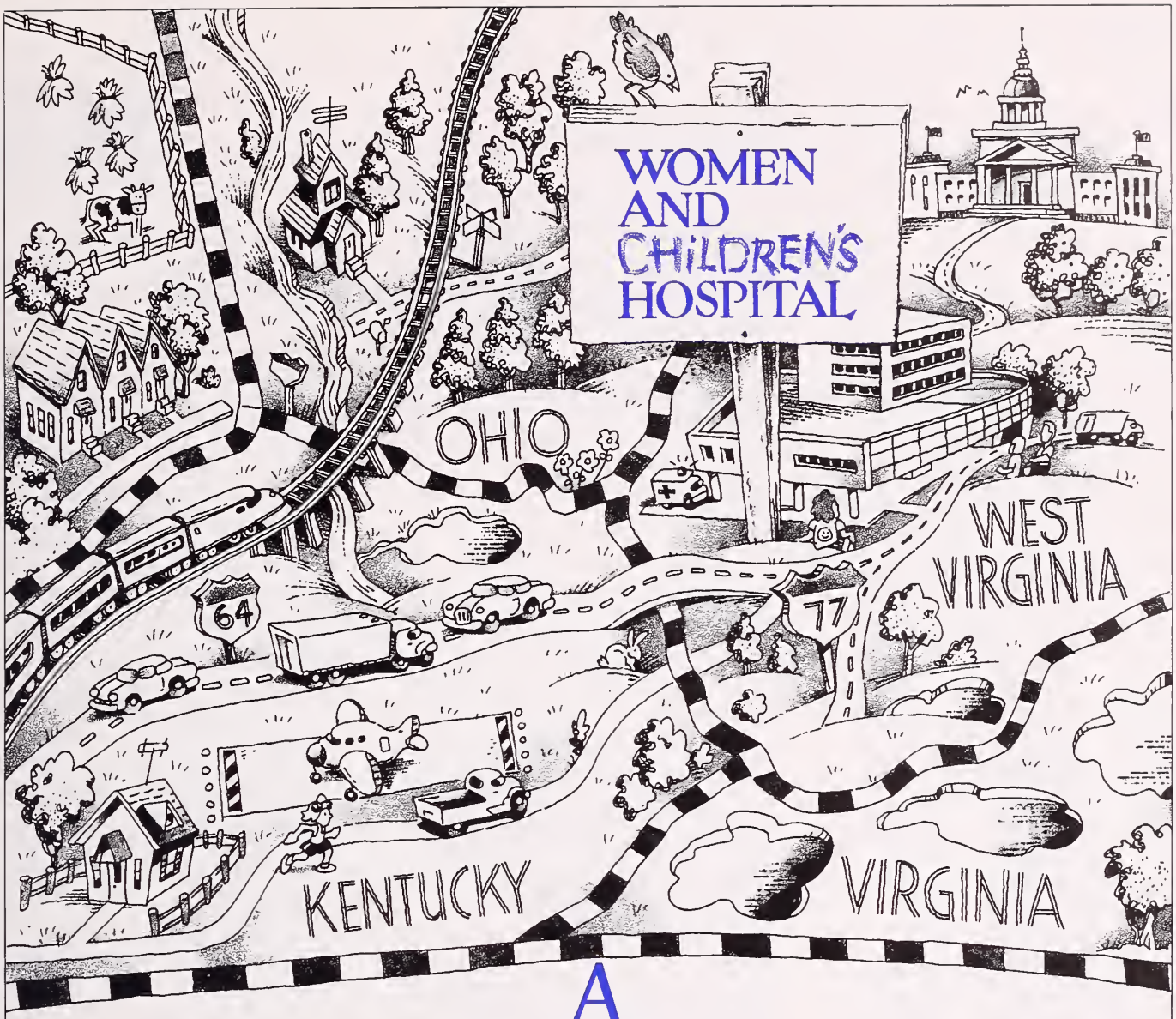
It is important to remember that commercial products containing eggs are not a concern because the egg will have been pasteurized. However, fresh raw eggs, soft-cooked eggs (poached, soft-scrambled, sunny-side up) and barely cooked eggs used in homemade ice cream and sauces such as hollandaise and bernaise may pose some risk.

To kill salmonella bacteria, an egg must be boiled for at least seven minutes or fried for three minutes per side.

Although hard-boiled eggs are not appealing to everyone, it's best to avoid raw and soft-cooked eggs.

The likelihood of purchasing a salmonella-contaminated egg is extremely small.

Nancy Rodreguez, R.D, Ph.D.,
Division of Family Resources



A HEALTHY NEW SIGN IN WEST VIRGINIA

The road to recovery runs both ways. Proof of that is the new Women and Children's Hospital of West Virginia. A healthy new sign for us all.

Women and Children's is a specialized facility of Charleston Area Medical Center devoted exclusively to the physical and emotional needs of women and children. And a new referral source for you, the doctors who care for them. A source for tertiary and specialized care for women and children, the 120-bed hospital offers many types of care found nowhere else in West Virginia.

State-of-the-art technology combines with specialists and sub-specialists in fields such as:

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We value your referrals for consultation or tertiary services. And we invite you to take a tour of our hospital. To arrange a tour, or for more information, call our administrator, Shirley Perry at (304) 347-9233.

WOMEN
AND
CHILDREN'S
HOSPITAL

Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

MU Opens Hanshaw Geriatrics Center

MU School of Medicine has opened the Frank E. Hanshaw Sr. Geriatrics Center, which will serve area physicians and senior citizens by providing comprehensive health assessments for the elderly.

The center, created through a $1 million grant from the Huntington Foundation, is located in HCA River Park Hospital (formerly Huntington Hospital).

Director Joye A. Martin, M.D., said the center's focus will be on finding unmet needs which interfere with health and well-being. "Geriatrics centers in other cities have found that, because of their additional resources, they diagnose an average of three to four health problems which aren't on the patient's chart," Doctor Martin said.

Broad-Based Approach

"Often elderly people accept a lower quality of life than they need to, and that's a shame," she said. "We're going to be taking a broad-based approach to changing that, because physical health, as important as it is, isn't the only thing that determines their quality of life."

Doctor Martin said that in addition to comprehensive physical examinations from doctors experienced in geriatrics, patients will have access to other health professionals such as social workers, psychologists, nurses, physical therapists and occupational therapists.

"Working as a team, we'll determine how well the patients are able to function in their day-to-day life, whether they have additional problems such as depression, and what the needs of their families are. We'll even have nurses who can visit patients' homes, if necessary, to fully evaluate their needs," she said. "Once problems are identified, we can move on to finding solutions for them."

In addition to Doctor Martin, the center's medical staff includes Dr. Shirley Neitch, an internal medicine specialist experienced in geriatric care, and Dr. Steven Cody, a clinical psychologist.

Doctor Martin stressed that the center is no substitute for a personal physician. "Once this kind of assessment is done, it requires the kind of follow-up that only a personal physician can provide," she said.

State 12th in Elderly

School of Medicine Dean Lester R. Bryant, M.D., predicted the center will make an important contribution to the region.

"There's no question that the health-care needs of elderly persons differ from those of their younger counterparts," Doctor Bryant said. "Addressing those special problems in that rapidly growing population is a great challenge nationwide, and here in West Virginia—where our percentage of elderly people ranks twelfth in the nation—we have a chance to be among the leaders in meeting those needs."

Dean Lester Bryant To Leave Marshall

School of Medicine Dean Lester R. Bryant, M.D., has resigned to accept a similar position at the University of Missouri-Columbia, MU President Dale F. Nitzschke announced. He said Doctor Bryant will remain at Marshall through December.

At the same time, Nitzschke announced the appointment of Doctor Charles H. McKown, Jr., Professor and Chairman of the Department of Radiology, as Interim Dean.

"Les Bryant has made a very significant contribution during his years as Dean and I'm sorry he'll be leaving us," Nitzschke said. "We're extremely fortunate, however, to have as a member of our faculty an individual with Doctor McKown's strength and enthusiasm . . . "

Nitzschke said Doctor McKown will begin immediately to work with Doctor Bryant on a daily basis.

"We have under way a number of important projects which will require continuing and constant attention," Nitzschke said. "These include the upcoming accreditation visit by the Liaison Committe on Medical Education, establishment of a new ambulatory care center, further development of the Frank Hanshaw Sr. Geriatrics Center, improvement in our residency programs, recruitment of new faculty, and outreach programs. By working closely together on these projects over the next four months, Doctor Bryant and Doctor McKown can effect a smooth transition."

National Search Started

He said Marshall will begin a national search immediately to select a permanent successor to Bryant.

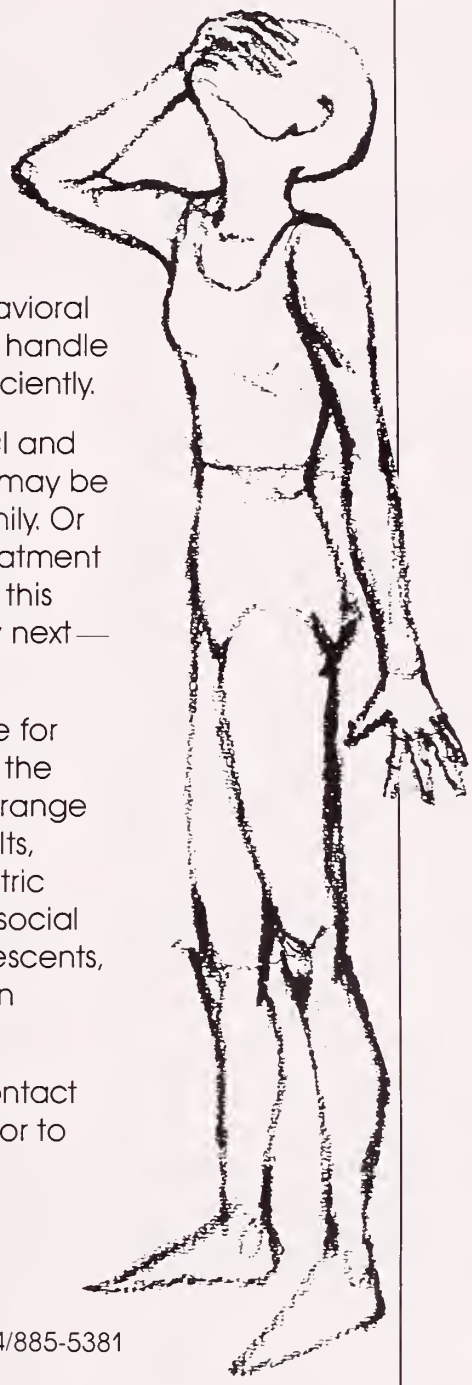
"My wife and I have enjoyed our years in Huntington, and we'll be leaving with considerable regret," Doctor Bryant said. "At the same time, I believe the School of Medicine now is firmly established, new funding has been provided and its future prospects appear to be excellent. This is a good time for me to turn over the reins and move on to new challenges in Missouri."

Doctor McKown, a native of Huntington, has been affiliated with the School of Medicine since 1975. He received his M.D. from the Medical College of Virginia, where he also served his internship.

He also has had postgraduate training through a radiology residency at the Medical College of Virginia, McGuire Veterans Administration Hospital, and at the National Institutes of Health.

Doctor McKown has served on a number of key committees within the school of Medicine. He also has been a member of the West Virginia Radiologic Technology Licensing Board of Examiners since 1976. He has served as President of the state division of the American Cancer Society, President of the Cabell County Medical Society, and Vice President of the West Virginia Radiolological Society Inc.

When a patient is exhausting your resources ...and you



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Harding Hospital

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Resolutions

The following resolutions were adopted/not adopted by the House of Delegates during the August 16-21 Annual Meeting of the West Virginia State Medical Association in White Sulphur Springs at the Greenbrier.

(Resolution No. 1, presented by Raleigh County Medical Society and pertaining to universal use of the HCFA Claim Form, was not adopted at the recommendation of the Resolution Committee as this is already in existence.)

(Resolution No. 2, presented by Raleigh County Medical Society and pertaining to interest on insurance claim forms, was not adopted at the recommendation of the Resolution Committee.)

Adopted was the following substitute for Resolution No. 3, pertaining to medical license retiree status and presented by W. Paul. Elkin, M.D.:

"WHEREAS, retired physicians no longer have active practice incomes yet may wish to continue holding a medical license they have held for many years, and

WHEREAS, present licensing regulations require either a full license at $200 biennially or a $50 retired license which merely holds the license in an active state but fails to allow the holder to write a prescription, and

WHEREAS, many older and retired physicians may have need to write a prescription on occasion with no intention of reentering full practice, therefore be it,

RESOLVED, That the West Virginia State Medical Association recommend that the Board of Medicine change their rules and regulations so as to permit physicians under a "retired" license to write a limited number of prescriptions per year, subject to all laws and ethical mandates, unless the physician is determined incompetent by his peers."

(Resolution No. 4, presented by the Western Medical Society and pertaining to the Annual Meeting site, was not adopted at the recommendation of the Resolution Committee.)

Adopted was the following substitute for Resolution No. 5, pertaining to reporting of a WVSMA audit and presented by the Eastern Panhandle Medical Society:

"WHEREAS, the yearly budget for the West Virginia State Medical Association is nearly one million dollars, and

WHEREAS, expenditures of the WVSMA are not delineated in detail to its membership, and

WHEREAS, the members of the Eastern Panhandle Medical Society are not satisfied with the detail of the current WVSMA audit of expenditures, therefore be it

RESOLVED, That the WVSMA have an accurate, detailed and full line item accounting of its budget, including income and expenditures, by an independent, reputable accounting firm with full report submitted directly to the President, Council and each component medical society."

(Resolution No. 6, pertaining to medical care access for children and presented by Carlos Lucero, M.D., was not adopted at the recommendation of the Resolution Committee as this policy already exists.)

Adopted was the following substitute for Resolution No. 7, pertaining to nursing shortages and presented by Carlos Lucero, M.D.:

"WHEREAS, a nursing shortage exists nationally, therefore be it

RESOLVED, That the West Virginia State Medical Association reactivate its Nursing Liaison Committee and communicate its concerns about the nursing shortage and its involvement to the nursing profession in general."

Adopted was the following substitute for Resolutions Nos. 8, 9, 11 and 25, pertaining to indigent health care, uncompensated care, and prenatal-postnatal care as presented by Carlos Lucero, M.D., the Parkersburg Academy of Medicine, and the Kanawha Medical Society:

"WHEREAS, the crisis of uncompensated care poses one of the most serious threats facing medicine today, and cost shifting is limited by DRGs and third-party payor regulations and

WHEREAS, greater numbers of workers are unable to afford medical insurance coverage and many are unemployed or exceed the income level to qualify for Medicaid, causing a broad band of our population to be without health insurance coverage, therefore be it

RESOLVED, That the WVSMA, form an ad hoc committee to work with the respective legislative committees to establish clear social policy on medical care expenditures and help define "adequate health care."

Adopted was the following substitute for Resolutions Nos. 10 and 17, pertaining to mandatory assignment and presented by Parkersburg Academy of Medicine and Kanawha Medical Society:

WHEREAS, many elderly cannot afford to pay the difference between Medicare allowable and the physician's usual fee, and

WHEREAS, the affluent among the elderly do not need our financial subsidy, and

WHEREAS, several state medical societies have established voluntary assignment programs enrolling a substantial majority of members, therefore be it

RESOLVED, That the WVSMA develop a voluntary, physician-sponsored program under which members agree to accept Medicare assignment for professional services to low income elderly."

Adopted was the following substitute for Resolution Nos. 12 and 20, pertaining to malpractice and presented by Parkersburg Academy of Medicine and Kanawha Medical Society:

"WHEREAS, one in four physicians in West Virginia face a professional liability claim or suit each year, and

WHEREAS, a significant number of these claims and suits are without merit yet must wend their way through the court system, adding to the sky-rocketing cost of professional liability insurance, and

WHEREAS, a plaintiff's attorney has no requirement under West Virginia law to have an expert opinion about a case before filing a claim, and

WHEREAS, many meritless claims are brought against physicians by plaintiff's attorneys with the expectation that they will be settled rather than being defended in court, and

WHEREAS, there is no way to determine which attorneys are abusing the system and subjecting physicians and their families to burdensome pain, suffering and expense, therefore be it

RESOLVED, That the West Virginia State Medical Association seek tort reform to reduce the number of frivolous suits by requiring trial lawyers to obtain written expert opinion from a practicing physician with expertise in the same medical field as the defendant physician, prior to filing a claim against a physician."

Adopted was the following substitute for Resolution No. 13, pertaining to WVSMA planning and presented by Parkersburg Academy of Medicine:

"WHEREAS, the medical profession needs direction and ongoing motivation for immediate goals, intermediate goals and long-range plans, therefore be it

RESOLVED, That the WVSMA Executive Committee reactivate the Long-Range Planning Committee to review in-depth the functions and effectiveness of the WVSMA, and be it further

RESOLVED, That recommendations be made in regard to more effective use of the WVSMA leadership and personnel in carrying out the immediate, intermediate and long-range goals for the improvement of the practice and status of medicine in West Virginia."

Adopted was the following substitute for Resolution No. 14, pertaining to WVSMA lobbying effort and presented by Parkersburg Academy of Medicine:

"WHEREAS, any effective lobbying effort is of general benefit to the WVSMA, therefore be it

RESOLVED, That a list of physicians from each component society willing to participate personally on an ad hoc basis, be developed and coordinated by the WVSMA to assist in effective lobbying efforts.

(Resolution No. 15, pertaining to mandatory peer review and presented by Parkersburg Academy of Medicine, was not adopted at the recommendation of the Resolution Committee as this is already in existence.)

(Resolution Nos. 16 and 28, pertaining to AIDS testing and presented by the Parkersburg Academy of Medicine and James L. Bryant, M.D., were not adopted at the recommendation of the Resolution Committee since "West Virginia has the best AIDS law in the United States and the WVSMA will continue to monitor the development of AIDS in the future.")

Adopted was the following substitute for Resolution Nos. 18 and 27, pertaining to tort reform and presented by Kanawha Medical Society:

"WHEREAS, there still exists a problem with availability of medical professional liability insurance and with affordability of liability insurance, therefore be it

RESOLVED, That the WVSMA prepare and submit tort reform legislation seeking the following items:

a. Immunity from punitive damages;
b. Cap of $250,000 for pain and suffering;
c. Statute of Limitations of six years for children and two years for adults from time of occurrence;
d. Periodic payments of awards greater than $500,000;
e. Elimination of the collateral source rule.

and be it therefore

RESOLVED, That this legislation be prepared to be entered on the opening day of the 1989 Legislative Session."

Adopted was the following substitute for Resolution No. 19, pertaining to a physician lobbyist and presented by Kanawha Medical Society:

"WHEREAS, there is need for a professional lobbyist, therefore be it

RESOLVED, That the WVSMA form a search committee to find a lobbyist, physician if qualified, to serve the West Virginia State Medical Association during the legislative sessions."

Adopted as presented by Kanawha Medical Society was Resolution No. 21, pertaining to consolidation of medical schools:

"WHEREAS, the state of West Virginia is in the midst of a serious fiscal crisis, and

WHEREAS, we are attempting to support three schools of medicine with a population smaller than many metropolitan areas and an ever-shrinking tax base, and

WHEREAS, the number of qualified applicants to medical schools has declined precipitously for the past several years, therefore be it

RESOLVED, That the West Virginia State Medical Association create a task force to study medical education in the state and formulate an agenda for the future and the possible consolidation of resources."

Adopted as presented by Kanawha Medical Society was Resolution No. 22, pertaining to special commendation to Michael M. Stump, M.D.:

"WHEREAS, much time-consuming labor has been involved in compiling an acceptable AIDS bill to be presented to the Legislature, and

WHEREAS, Michael M. Stump, M.D., of Elkins, WV, has devoted a large amount of time and work in completing this task, therefore be it

RESOLVED, That the West Virginia State Medical Association issue a special commendation to Doctor Stump for his involvement in the completion of this piece of legislation."

Adopted as presented by Kanawha Medical Society was Resolution No 23, pertaining to seat belt legislation:

"WHEREAS, safety belts have been shown unequivocally to save lives and reduce the incidence of serious injury in motor vehicle collisions, and

WHEREAS, the majority of West Virginians, as shown by numerous polls, favor a law supporting safety belt use, and

WHEREAS, the Legislature of West Virginia passed a law that upon review by Federal officials was found to have the potential for being one of the strongest laws in the nation, and

WHEREAS, the Governor of West Virginia then vetoed this safety belt bill, therefore be it

RESOLVED, That the West Virginia State Medical Association go on record supporting a safety belt law and make it a priority issue for the upcoming legislative year, and be it further

RESOLVED, That the West Virginia State Medical Association proceed with a safety belt educational program in the schools."

Adopted as presented by Kanawha Medical Society was Resolution No. 24, pertaining to tobacco products advertising:

"WHEREAS, the surgeon general has recently declared that tobacco products are addictive, and

WHEREAS, he suggests that tobacco sales be licensed in the way that alcohol sales are regulated, and

WHEREAS, a major concern is the easy availability of these substances to minors, and

WHEREAS, tobacco is killing more than 300,000 Americans each year, therefore be it

RESOLVED, That the West Virginia State Medical Association petition the Legislature of the State of West Virginia to enact legislation forbidding the sale of tobacco products in vending machines, forbidding the distribution of any types of tobacco or any sort of free sample or giveaway programs, and requiring a licensing of vendors for the distribution of tobacco products, and be it further

RESOLVED, That the West Virginia State Medical Association undertake an active program to educate the public to the dangers of tobacco."

Fiscal Note: Depends on scope of "active" program and use of paid time and space in media or if only "public service" material. Agency preparation of materials could range from $3,000 on up to whatever limit is set.

Adopted was the following substitute for Resolution No. 26, pertaining to disclosure of physicians' names seeking treatment for substance abuse and presented by Kanawha Medical Society.

"WHEREAS, the disclosure of treatment of substance abuse disorders among physicians by the media under the guise of the Freedom of Information Act directly contradicts that physician's right of confidentiality, and

WHEREAS, this infringement is a violation of that physician's civil rights, and

WHEREAS, the aforementioned public disclosure unfairly indicts those physicians seeking treatment, and

WHEREAS, such public disclosure of the name of any physician seeking treatment for substance abuse deters physicians with substance abuse problems from seeking treatment, therefore be it

RESOLVED, That the West Virginia State Medical Association draft for submission to the legislature, legislation preventing public disclosure of a physician's voluntary treatment for substance abuse."

Amendments

Amendment Adopted, Bylaws

The following amendment to the Bylaws of the West Virginia State Medical Association was adopted by the House of Delegates, August 20, 1988, in White Sulphur Springs at the Greenbrier:

Amend CHAPTER IX.— SECTIONS, Sec. 1, as follows with new language being underscored: "The objectives of sections organized under provisions of this Constitution and Bylaws are (a) to form closer professional relationships among physicians practicing in particular specialty areas; and among medical residents and students; (b) to foster among physician members of particular specialties, and among residents and students, educational and other activities directed toward better patient care; and <u>(c) assist hospital medical staffs in confronting concerns in the health care environment.</u>"

Amend CHAPTER IX.— SECTIONS, Sec. 3, as follows with new language being underscored: "There is hereby authorized, within the membership framework of the West Virginia State Medical Association, establishment of Resident Physician, Medical Student and <u>Hospital Medical Staff</u> Sections to (a) provide for direct participation of residents and medical students in educational, business and other activities of the Association; (b) establish effective lines of communication among young physicians, physicians-to-be and their more senior colleagues; and (c) <u>provide a forum to discuss the needs and concerns of physician members of hospital medical staffs.</u> Each such section shall develop its own constitution and bylaws or other organizational procedures and elect its officers, under provisions of Section 3 of this Chapter; provided, however, that such a constitution, bylaws or revisions and amendments shall not be inconsistent with principles of organization of the Wset Virginia State Medical Association, and shall be subject to approval by the Association's Council.

(Note: The purpose of this amendment is to provide for the organization of a Hospital Medical

Staff Section within the framework of the WVSMA.)

Proposed Amendments

The following proposed amendments to the Constitution and Bylaws of the West Virginia State Medical Association were presented to the House of Delegates during the 1988 Annual Meeting in White Sulphur Springs at the Greenbrier, and will be voted upon at the 1989 Annual Meeting.

PROPOSED AMENDMENTS TO THE CONSTITUTION

Amend ARTICLE IV.—COMPOSITION—Sec. 1, by deleting the word, "honorary," and inserting the word "associate."

The sentence would now read, "This Association shall consist of active, retired, associate, resident and student members."

(Note: The purpose of this amendment is to simply delete the word, "honorary," which inadvertently was overlooked when in 1987 an amendment was passed to eliminate the category of honorary membership; and to add a membership category of associate.)

Amend ARTICLE IV.—COMPOSITION—Sec. 7, by inserting a new Sec. 7 as follows: "Associate members shall be osteopathic physicians or oral surgeons licensed in the State of West Virginia and who are members in good standing of their respective professional associations. Associate membership shall include licensed non-resident medical doctors who desire to be members of the West Virginia State Medical Association. Such associate members shall meet all qualifications outlined in the Association By-Laws."

Amend ARTICLE IV.—COMPOSITION—Sec. 7, by renumbering present Sec. 7 as Sec. 8.

(Note: The purpose of this amendment is to provide for associate membership in the Association.)

PROPOSED AMENDMENTS TO THE BYLAWS

Amend CHAPTER 1.—MEMBERSHIP—Sec. 5, by inserting a new Sec. 5 as follows: "Associate members shall consist of those duly licensed osteopathic physicains, oral surgeons and/or non-resident doctors of medicine who are members in good standing of their respective professional associations. They shall not have the right to vote or hold office in this Association; but, shall otherwise enjoy all other membership privileges and benefits, including attending scientific and other meetings at membership rates and receiving all publications. They shall pay annual dues as may be fixed by the Association Council."

Amend CHAPTER 1.—MEMBERSHIP—Sec. 5, by renumbering present Sec. 5 as Sec. 6.

(Note: The purpose of these amendments is to describe and outline privileges and benefits of associate membership.)

Amend CHAPTER III.— HOUSE OF DELEGATES—Sec. 3, by deleting the period (.) after the word, "quorum," and adding ", and all members of the House shall have a right to vote."

(Note: The purpose of this amendment is to clairfy the question of who has the right to vote in the House of Delegates.)

Amend CHAPTER VII.—JUDICIAL COMMISSION—Sec. 4, by inserting a new Sec. 4 as follows: "Members appointed or elected to the Judicial Commission shall not hold any other appointed or elective office within the Association during the period of service on the Commission in order to avoid any real or potential conflict of interest regarding any decisions or actions taken by the Commission. Any member appointed or elected to the Judicial Commission shall immediately resign any other office or position held with the Association upon said appointment or election."

Amend CHAPTER VII.—JUDICIAL COMMISSION—Sec. 5, by inserting a new Sec. 5 as follows: "Members of the Judicial Commission shall hold no other outside position with any other medical entity or governing board which would in any way compromise or potentially compromise their ability to serve impartially on the Commission or to make unfettered judgments in the best interest of medicine and the Association."

Amend CHAPTER VII.—JUDICIAL COMMISSION—Secs. 4, 5, 6, 7 and 8 by re-numbering them as 6, 7, 8, 9 and 10, respectively.

(Note: The purpose of these amendments is to avoid conflict of interest of members of Commission by limiting membership to members who hold no other office or position in the Association.)

Amend CHAPTER VIII.—COMMITTEES—Sec. 3, by adding the following sentence to paragraph two: "Members elected to positions as Delegates or Alternate Delegates to the American Medical Association shall, upon election, become immediately eligible for service at the next called annual, interim or special meeting of the AMA House of Delegates."

(Note: The purpose of this amendment is to change the two-year terms of office of West Virginia State Medical Association Delegates and Alternates to the AMA so that they may begin immediately following the WVSMA's Annual Meeting, at the time of the election, rather than their having to wait until January 1 of the following year.)

Amend CHAPTER VIII.—COMMITTEES—By adding a new Sec. 5 to read as follows: "The Audit Committee shall consist of six members of the Association, appointed by Council and who possess some expertise in financial matters. One of the six members shall be the Association Vice President, who shall serve as Chairman. The term of office for the other five members of Committee shall be for five years.

(Note: The purpose of this amendment is to add to the Association's Standing Committees an Audit Committee which is ongoing from year to year to oversee the financial workings of the WVSMA.)

Annual Reports

Cancer Committee

Meetings of the Cancer Committee were held August 9, 1987, during the WVSMA Annual Meeting at The Greenbrier in White Sulphur Springs; and during the Mid-Winter Clinical Conference on January 24, 1988, at the Holiday Inn Charleston House, Charleston.

An update on the Cancer Registry Program was presented by Dr. John C. Frich, Jr. The conversion of the CHOP-DS System to the SMART System is progressing at United Hospital Center, Clarksburg, and at West Virginia University Health Sciences Center, Morgantown. Those interested in the program are requested to contact Doctor Frich.

A Cancer Management Course sponsored by the American College of Surgeons has been arranged by Dr. Eric Mantz and was held August 26-27, 1988, at the Holiday Inn Charleston House, Charleston. Doctor Mantz is State Chairman of the Field Liasion Program Commission on Cancer.

Committee members discussed standards for defining community cancer centers and programs, and agreed to follow the American College of Surgeons Commission on Cancer guidelines.

Mr. A. Mills from the WV American Cancer Society reported that the West Virginia Division is active in conducting Breast Examination Seminars and Fashion Shows using the Reach to Recovery Volunteers. Seminars were held at Beckley, Wheeling and Fairmont at the YWCAs, and were sponsored by the Harrison, Marion and Monongahela county units and the Mary Babb Randolph Cancer Center, Morgantown.

J. Wilson, Ph.D., reported on a plan for the formulation of a West Virginia Cancer Consortium which will focus on cancer control and treatment.

A Cancer Program was held at West Virginia University on March 18 and 19, 1988.

Dr Steven J. Jubelirer reported that CCOP has been funded by NCI from another three years. Those interested in the Study should contact him.

The Summer Camp at Camp Horseshoe in Tucker County had an attendance of 25 children. It was a very successful program, and the number of children in attendance is expected to double next year, it was reported by Shirley Barber.

Dr. Cordell A De La Pena reported that the United Hospital Center and Cancer Biologics of America, Inc., have initiated a joint effort in the fight against cancer. Drs. James A. Knost and Paul Brager are the investigators. The study involves Interlukin-2 therapy and malignant skin melanomas.

The availability of oncology services in small communities was discussed. Patients usually have to be sent to a Cancer Center and are experiencing problems with sufficient funds to cover their treatment. Ms. Barber informed the Committee the American Cancer Society has limited funds for drugs and travel. Doctor De La Pena informed the Committee that in Clarksburg the Harrison County Cancer Society will help the indigent with travel, drugs and equipment.

Dr. Richard J. Pearson discussed the incidence of cancer of the cervix in West Virginia, as well as the contents of a questionnaire prepared by the West Virginia University Department of Community Medicine, concerning cancer of the cervix deaths. The committee approved the questionnaire, which is to be mailed to the physicians involved in the study.

The Committee discussed and supports the Breast Cancer Detection Awareness Program adopted by the American College of Surgeons Field Liasion Committee of the Commission on Cancer as related by the American Cancer Society. The question arose concerning which surgical specialist should perform breast surgery. The committee suggested that the credentials committee of each hospital should make that decision.

The Drug Information Division of the United States Pharmacopeial Convention, Inc., is currently working on a new publication on unorthodox/unproven methods of cancer management, and has requested input from the professional community. The Committee will further explore this matter.

Respectfully Submitted,
Catalino B. Mendoza, Jr., M.D.
Chairman

Committee on Medical Education and Hospitals

The West Virginia State Medical Association (WVSMA) is an accrediting arm of the Accreditation Council for Continuing Medical Education (ACCME), and the WVSMA's Committee on Medical Education and Hospitals (CMEH) is charged with the responsibility for accreditation of intrastate continuing medical eduaction programs, primarily at community hospitals. The State Medical Association has had this role, with respect to surveyed and approved community hospitals and other organizations, since 1972.

On October 22, 1986, the CME Accreditation Program of the WVSMA was awarded continued recognition for a period of four years. Committee and staff were congratulated by the ACCME and its Committee for Review and Recognition (CRR) for their continued interest and effort in providing an accreditation program for intrastate sponsors.

At the suggestion of the CRR following its 1986 review, beginning in January, 1987, at least two persons have conducted the site surveys, and in some instances there have been three, including the Association's Accreditation Coordinator. Also, in April, 1987, the Procedures for Reconsideration and Appeal of Adverse Accreditation Deci-

sions were written and approved by the CMEH, and on May 8, 1987, were approved by the Association's Council.

First Annual CME Workshop

In January, 1988, the First Annual WVSMA CME Workshop was held in Charleston. There were 30 attendees, including accreditation surveyors and providers. Guest speakers included Frances M. Maitland of Chicago, Assistant Secretary, ACCME, who spoke concerning the Essentials; and David Lichtenauer of Cincinnati, Medical Sciences Liaison, Education Unit, The Upjohn Company, who addressed "Relationships with the Pharmaceutical Industry."

Committee determined the workshop a success.

Accredited Sponsors of CME

As the result of a site survey, deemed appropriate upon receipt and review of a completed questionnaire, the following continuing medical education programs, in concert with essentials and protocol/guidelines developed by the ACCME, have been approved by the WVSMA's Commitee for Category 1 credit of the Physician's Recognition Award of the American Medical Association:

- American College of Surgeons, WV Chapter
- American Heart Association, WV Affiliate
- Beckley Appalachian Regional Hospital, Beckley
- Broaddus Hospital/Myers Clinic, Philippi
- Charleston Area Medical Center, Charleston
- City Hospital, Martinsburg
- Fairmont General Hospital, Fairmont
- Jackson General Hospital, Ripley
- Mid-Ohio Valley CME Program, Parkersburg
- Monongahela Valley Association of Health Centers (Fairmont Clinic), Fairmont
- Raleigh County Medical Society CME Program, Beckley
- Reynolds Memorial Hospital, Glen Dale
- St. Francis Hospital, Charleston
- St. Mary's Hospital, Huntington
- United Hospital Center, Inc., Clarksburg
- VA Medical Center, Martinsburg
- Weirton Medical Center, Weirton
- WV Academy of Ophthalmology
- WV Academy of Otolaryngology—Head and Neck Surgery
- Wheeling Area Continuing Medical Education, Wheeling

Surveys/Resurveys Conducted

During 1987-88 (September-August), the following resurveys have been conducted since our last report: WV Academy of Ophthalmology; St. Francis Hospital of Charleston; Wheeling Area CME Program; Weirton Medical Center; American Health Association, WV Affiliate; St. Mary's Hospital of Huntington; Beckley Appalachian Regional Hospital; and WV Chapter, American College of Surgeons.

Seven of the above programs were granted full four-year accreditation (continued), with two of them being requested to submit one-year interim reports to substantiate improvement or correction in certain areas; and one being granted a two-year provisional (continued).

Anticipated surveys for the remainder of the year are: Broaddus Hospital/Myers Clinic, Philippi; and Raleigh County Medical Society, Beckley.

Summary

Mary Hamilton, the WVSMA's CME Accreditation Coordinator, attended the 1988 Congress on Continuing Medical Education meeting in Los Angeles. Some of the concerns addressed by this prestigious group included evaluation, current experimental approaches, the future role of technology, and linking CME to quality assurance, with one entire section being devoted to meeting planners, course managers and administrators. Following her return to the office, the directors of the Association's accredited programs were sent a questionnaire/annual update to be completed and returned to be included as a part of their permanent file.

Working relationships with the national ACCME office in the Chicago area have continued to be good. Our accreditation process has not been carried out without some problems. We've reported to you in past years denied accreditation for one program, withdrawal of another, annual interim reports for others, and some programs have received continued probationary status until that program has been amended to meet Committee standards. But the overall results seem solid and effective.

We continue to see dedication and commitment to the CME programs over the State by CME directors, physicians and staff. Your Committee can assure you that Association expenditures are justified and provide an invaluable service.

Respectfully submitted,
Willaim O. McMillan, Jr., M.D.
Chairman
David Z. Morgan, M.D.
Vice Chairman

Obituaries

DAVID L. EALY, M.D.

Dr. David L. Ealy, Director of the Marshall County Health Department since 1964, died August 18 in a Glen Dale Hospital. He was 72.

Born in Moundsville, he was a resident of Glen Dale.

Doctor Ealy was a former Secretary and President of the Marshall County Medical Society.

He was graduated from Washington and Jefferson College, and received his M.D. degree in 1941 from Jefferson Medical College in Philadelphia.

Doctor Ealy interned at Allegheny General Hospital in Pittsburgh.

He served from 1942 to 1946 during World War II as a U.S. Marines physician.

Survivors include the wife, Mrs. Betty Ealy; a son, David Ealy of Moundsville; three daughters, Amy Beth Ealy, at home; Mrs. James Shook of Moundsville, and Mrs. Robert Breckenridge of Chicago, and a sister, Sue Stumpf of New Kensington, Pennsylvania.

County Society

PARKERSBURG ACADEMY

The Academy of Medicine of Parkersburg met August 10 at the Parkersburg Country Club.

A lengthy discussion on PPOs was held, with an amendment approved to send minutes of the meeting to administrators of both local hospitals.

Dr. Bill M. Atkinson was recognized for his upcoming installation as President of WVSMA.—Humberto Escandon, M.D., Secretary-Treasurer.

New Members

The following physicians were welcomed in August as new members of the West Virginia State Medical Association:

Residents

Gene Beremejo Duremedes, M.D., 1295-G Stewartstown Road, Morgantown 26505

Susan M. Harmon, M.D., PO Box 2290, Ckarksburg 26302

Katarina Nordensjo, M.D., 1801 Sixth Avenue, Huntington 25701

Necrology Report

The following is a list of West Virginia physicians whose deaths have been reported to the West Virginia State Medical Association during the past year:

1987-1988

July 7—Carmelo L. Terlizzi
Tampa, FL

Aug. 2—Yasa J. H. Reddy
Man

Aug. 10—Wyson Curry, Jr.
Montgomery

Aug. 28—Curtis G. Power, Jr.
Martinsburg

Oct. 8—Jay E. Rogers, Jr.
Charleston

Oct. 5—Thomas L. Martin
Greenville, SC

Oct. 17—F. Lloyd Blair
Parkersburg

Nov. 12—Clifford A. Stevenson
Beckley

Dec. 8—Randall Connolly
Vienna

Dec. 13—Genevieve G. Dutton
White Sulphur Springs

Dec. 13—Roy R. Summers
Charleston

Dec. 15—Hu C. Myers
Philippi

Dec. 20—Wilbur F. Shirkey, Jr.
Charleston

Jan. 15—Carl L. Anderson
Glen Dale

Jan. 18—James P. Baker
Lewisburg

Feb. 20—Nabil A. Ragheb
Charleston

Mar. 14—Pedro R. Montero
Weirton

Mar. 19—Elden H. Pertz
Weston

Apr. 16—Henry S. Mullens
Kenova

Apr. 30—Andrew J. Weaver
Clarksburg

June 3 —L. Walter Fix
Martinsburg

Respectfully submitted
Merwyn G. Scholten
Executive Director

Charleston, WV
August 16, 1988

WESPAC Members

Listed below are additional 1988 WESPAC members reported to the *Journal* since the listing published in the September issue. Sustaining members (those contributing $100 or more) are indicated by an asterisk. New WESPAC members will be reported next month.

Boone
Ernesto Yutiamco

Cabell
Anthony J. Bowdler
John A. Hunt*
M. Bruce Martin*
Tara C. Sharma*

Eastern Panhandle
John A. Draper, Jr.

Kanawha
L. M. Minardi
Terry Ray Perrine
F. Thomas Sporck*
Ganpat G. Thakker
L. Blair Thrush
George E. Toma*

Monongalia
Justus C. Pickett
Ivan R. Schwab*

Ohio
Fredeswinda Mejia

Parkersburg
Stephen D. Hanna
Kenton E. Harris
Malcolm B. Louden, Jr.*
Paul E. Vandyke

Auxiliary Members

Cabell
Linda M. Turner*

Harrison
Lydia L. Lazaro

Tygart's Valley
Priscilla C. Stump

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Samuel A. Strickland, MD
James W. Caudill, MD
R. David Allara, MD

OTOLARYNGOLOGISTS

Romeo Y. Lim, MD
R. Austin Wallace, MD

EENT

John A. B. Holt, MD

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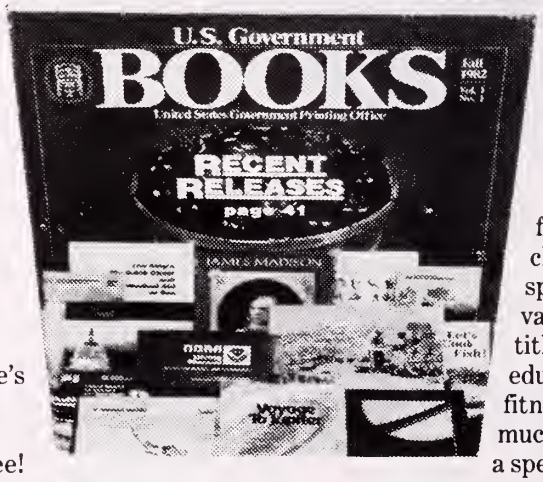

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  - **urinary tract†**
  - **skin/skin structure†**
  - **bones and joints†**
- **Convenient *B.I.D.* dosage – 250 mg, 500 mg and 750 mg tablets**

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†**Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**
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A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

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C09327 MLR-261

Cipro® TABLETS (ciprofloxacin HCl/Miles)

■ 500 mg *B.I.D.* for most infections; 750 mg *B.I.D.* for severe or complicated infections.

BRIEF SUMMARY
CONSULT PACKAGE INSERT FOR FULL PRESCRIBING INFORMATION

INDICATIONS AND USAGE

Cipro® is indicated for the treatment of infections caused by susceptible strains of the designated microorganisms in the conditions listed below

Lower Respiratory Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Pseudomonas aeruginosa, Haemophilus influenzae, Haemophilus parainfluenzae,* and *Streptococcus pneumoniae.*

Skin and Skin Structure Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Proteus mirabilis, Proteus vulgaris, Providencia stuartii, Morganella morganii, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus aureus* (penicillinase and nonpenicillinase-producing strains), *Staphylococcus epidermidis,* and *Streptococcus pyogenes*

Bone and Joint Infections caused by *Enterobacter cloacae, Serratia marcescens,* and *Pseudomonas aeruginosa*

Urinary Tract Infections caused by *Escherichia coli, Klebsiella pneumoniae, Enterobacter cloacae, Serratia marcescens, Proteus mirabilis, Providencia rettgeri, Morganella morganii, Citrobacter diversus, Citrobacter freundii, Pseudomonas aeruginosa, Staphylococcus epidermidis,* and *Streptococcus faecalis.*

Infectious Diarrhea caused by *Escherichia coli* (enterotoxigenic strains), *Campylobacter jejuni, Shigella flexneri;** and *Shigella sonnei** when antibacterial therapy is indicated.

*Efficacy for this organism in this organ system was studied in fewer than 10 infections

Appropriate culture and susceptibility tests should be performed before treatment in order to isolate and identify organisms causing infection and to determine their susceptibility to ciprofloxacin. Therapy with Cipro® may be initiated before results of these tests are known, once results become available appropriate therapy should be continued. As with other drugs, some strains of *Pseudomonas aeruginosa* may develop resistance fairly rapidly during treatment with ciprofloxacin. Culture and susceptibility testing performed periodically during therapy will provide information not only on the therapeutic effect of the antimicrobial agent but also on the possible emergence of bacterial resistance.

CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General

As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions

Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients

Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness, therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C

Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers

It is not known whether ciprofloxacin is excreted in human milk, however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding

CENTRAL NERVOUS SYSTEM *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia*

SKIN/HYPERSENSITIVITY *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum

SPECIAL SENSES *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste*

MUSCULOSKELETAL *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout

RENAL/UROGENITAL *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis

CARDIOVASCULAR palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis

RESPIRATORY epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes Changes in laboratory parameters listed as adverse events without regard to drug relationship.

- Hepatic – Elevations of ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%)
- Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).
- Renal – Elevations of Serum creatinine (1.1%), BUN (0.9%).
- CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

*** Due to susceptible strains of indicated pathogens. See indicated organisms in Brief Summary.**

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg *B.I.D.*
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg *B.I.D.*
Urinary Tract*	Mild/Moderate	250 mg *B.I.D.*
	Severe/Complicated	500 mg *B.I.D.*
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg *B.I.D.*

For further information, contact the Miles Information Service: 1-800-642-4776. In VA. call collect: 703-391-7888.

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C09327 MLR-261

Book Review

CURRENT NONINVASIVE VASCULAR DIAGNOSIS—Edited by Ali F. AbuRahma, M.D., and Edward B. Diethrich, M.D. 408 pages. Price $48. PSG Publishing Company, Inc., 545 Great Road, P. O. Box 6, Littleton, Massachusetts. 1988.

I recently had the pleasure of reading and reviewing a new textbook on noninvasive vascular techniques entitled, *Current Noninvasive Vascular Diagnosis,* edited by Ali F. AbuRahma, M.D., and Edward B. Diethrich, M.D. This text is well organized with chapters dealing with cerebrovascular, peripheral vascular and peripheral nervous non-invasive techniques.

An impressive list of distinguished pioneers in the field of non-invasive vascular technology have contributed chapters. These chapters are concise, well illustrated and include history, development and bioengineering and physical principles of each diagnostic technique as well as how to integrate these techniques into evaluation and clinical assessment of the vascular patient.

Doctor AbuRahma draws an extensive personal experience with thousands of patients studied at the Charleston Area Medical Center and West Virginia University.

This book is organized in a pattern and manner which makes it valuable to physicians in internship, residency and in private practices dealing with cerebrovascular and peripheral arterial and venous disease. Those particularly in the practice of surgery, neurology, neurosurgery, internal medicine and family practice would find this text a valuable introduction and review of a rapidly expanding and increasingly important field. Vascular nurses and technologists would also benefit from review of this text, and it will serve as a valuable library and laboratory reference text.

I have personally recommended this text to my colleagues in neurology and the nurse technicians of our cerebrovascular laboratories.
—Henry L. Kettler, M.D., Department of Neurology, The Wheeling Clinic.

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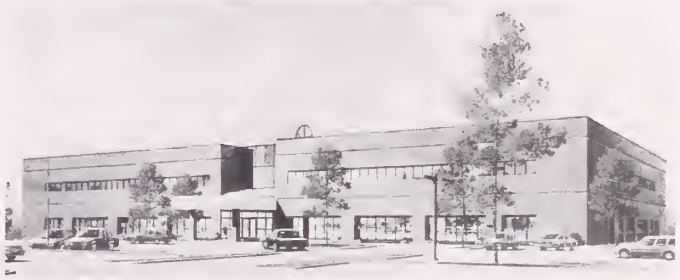

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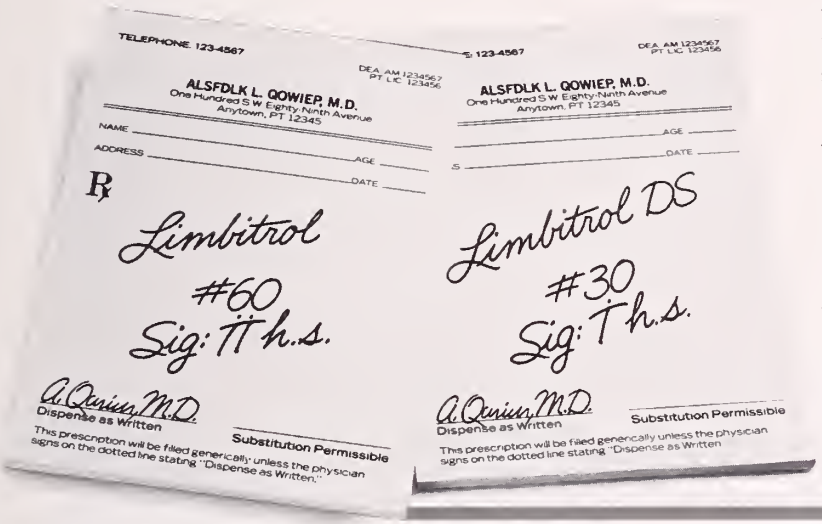

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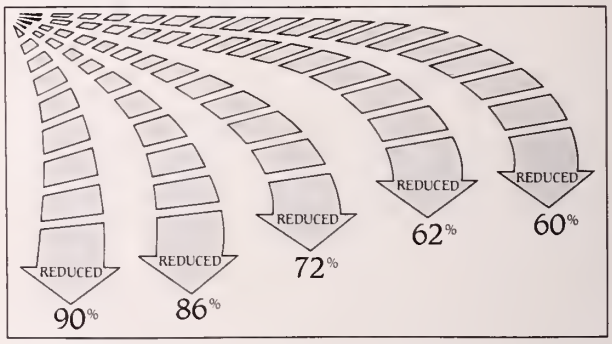

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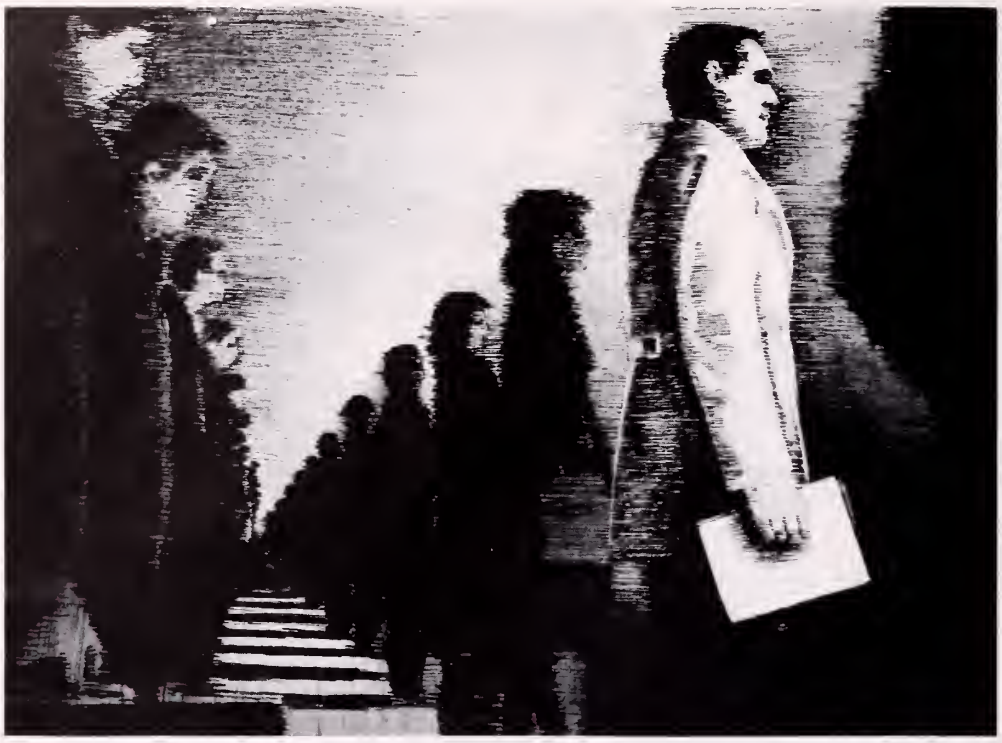

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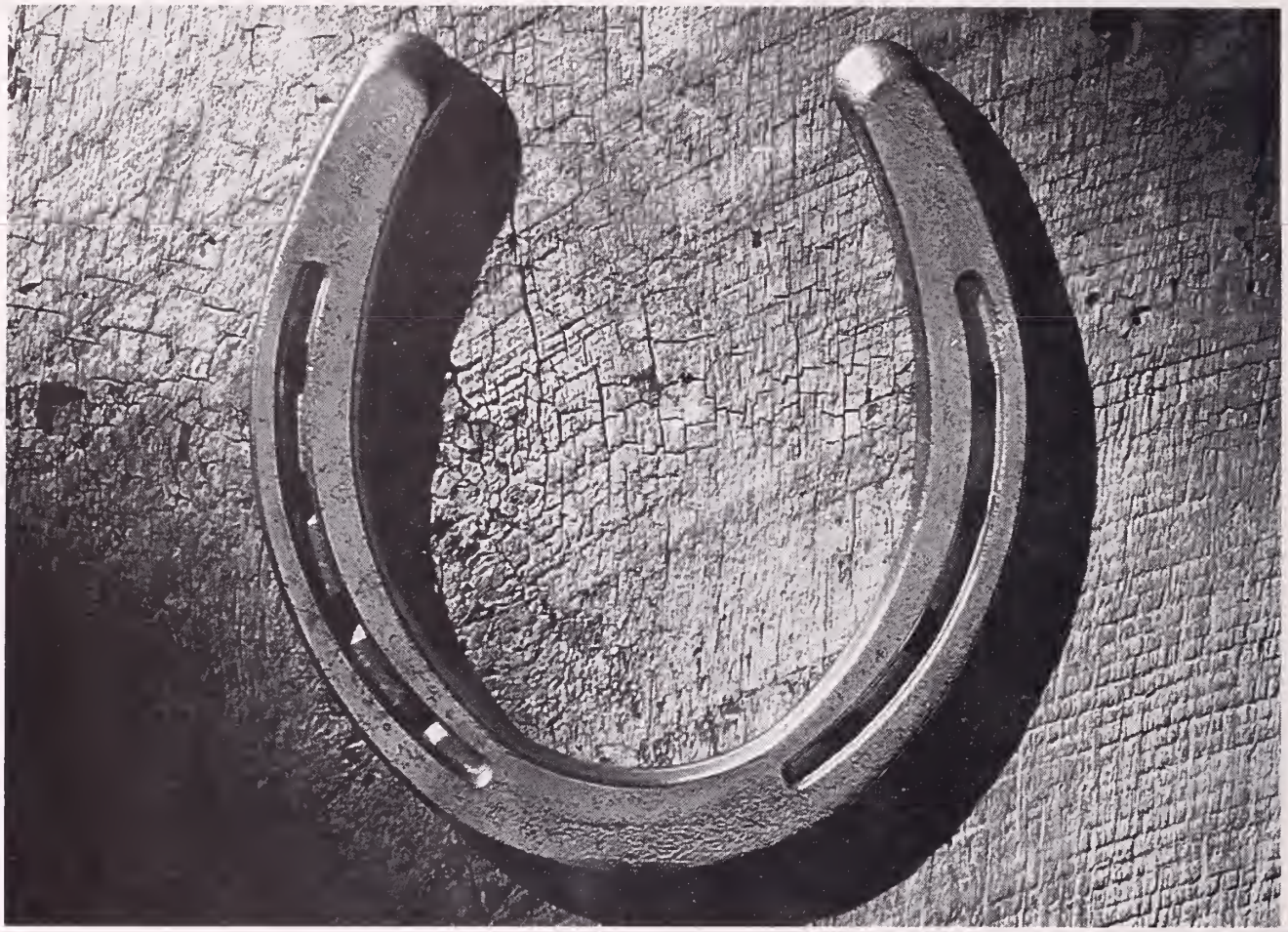

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Position-Induced Internal Jugular Vein Thrombosis

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An unusual case of position-induced internal jugular vein thrombosis (IJVT) and a review of the literature are presented. Common causes of IJVT include central venous catheterization, head and neck infections and tumors,and venopuncture secondary to illicit drug abuse. However, stasis secondary to anatomic position of the head and neck appears to be an etiologic consideration.

Case Report

An 83-year-old woman presented with a one-week history of painless swelling of the right neck and difficulty swallowing. The onset was abrupt, and indeed the symptoms were first noted by the patient upon awakening from an uneventful night's sleep. She had no further symptoms and her review of systems was entirely unremarkable. Her past medical history was significant for hypertension, well controlled medically, a previous right inguinal hernia, herniorrhaphy and lumbosacral laminectomy.

Physical examination revealed a thin, spritely woman appearing younger than her stated age of 83. Vital signs and temperature were normal. There was no periorbital edema. She demonstrated full range of motion at the neck. A firm, non-pulsatile, non-tender, cylindrical mass was palpable along the anterior border of the right sternocleidomastoid muscle. There was no local induration, erythema or palpable adenopathy. The trachea was deviated slightly to the left. Carotid pulses were palpable bilaterally and were without bruits.

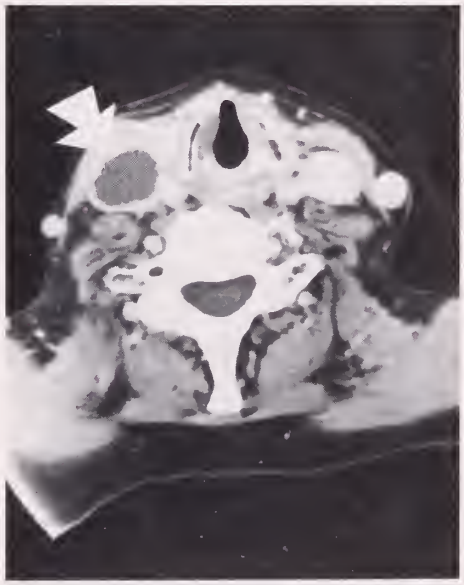

Figure. CT scan through the C_6 vertebra in a woman with right internal jugular vein thrombosis. Note low-density lumen with high-density vessel wall, increased vein diameter, and slight leftward deviation of the trachea.

A barium swallow revealed only slight leftward deviation of the esophagus. A CT scan of the neck was then obtained and was remarkable for total thrombotic occlusion of the right internal jugular vein (Figure). The thrombus extended from the base of the skull to the thoracic inlet, but did not enter the cranium or extend into the superior vena cava.

On further questioning, the patient recalled that on the evening prior to the onset of her symptoms she had spent time cleaning the spider-webs from above the exterior of her kitchen windows. She notes that while "hanging out the window" she could look back over her right shoulder and clear the webs with a broom in her right hand. She denied any history of neck trauma, previous thrombotic events, malignancy, blood dyscrasia or central venous catheterization. She also denied recent infection or pharyngitis.

The patient was admitted and started on intravenous heparin. On the third day of admission oral warfarin therapy was initiated. During the ensuing days her dysphagia subsided and the neck mass became subjectively less prominent. On the seventh day after admission, the intravenous heparin was discontinued and she was discharged the following morning. Warfarin therapy was continued for four months, during which time she remained well.

Discussion

During the pre-antibiotic period of this century, IJVT was a common complication of fulminant infections of the head and neck. It was first described by Long (1) in 1912 in a patient with a peritonsillar abscess. It has also been associated with dental sepsis, sinusitis and facial wound infections. Long proposed that thrombosis occurred secondary to lymphatic spread of infection to the internal jugular vein from a primary abscess within the oropharynx. Direct extension and hematogenous spread of infection have also been proposed (2).

Since the advent of antibiotics, IJVT secondary to infection has become less frequent; however, recent reports of thrombosis secondary to pharyngitis (3) and neck abscess (4) underscore its continued importance in the differential diagnosis.

The importance of IJVT as a complication of central venous catheterization is well supported by the literature (5-8). Chastre et al. (6) prospectively studied 33 critically ill patients requiring Swan-Ganz catheterization via the internal jugular vein. They found venographic or autopsy evidence of IJVT in 22 patients (66 per cent). Of 63 patients studied, Ahmed and Payne (5) found radiographic evidence of IJVT in 65 per cent.

In recent years, drug abuse using the internal jugular vein as a portal of injection has become a frequent cause of IJVT. Cohen et al. (9) presented seven patients, four of whom had thrombosis secondary to intravenous drug abuse. Two of these patients had concomitant neck infections. Other less common causes of IJVT include extrinsic compression by tumor (9), Trousseau's syndrome (10) and oral contraceptive use (11).

"That this is a plausible etiology seems at least indirectly supported by laboratory studies."

Effect of Head Position

We have been unable to find another reported case of position-induced IJVT in the recent literature. That this is a plausible etiology seems at least indirectly supported by laboratory studies. Gooding and Stimac (12) investigated the effect of head position on internal jugular vein patency in an anesthetized infant monkey and an infant human cadaver. They performed venograms with the subject's head in the neutral position and at various degrees of rotation to the right and left.

It was found that an internal jugular vein of normal caliber in the neutral position became markedly narrowed when the head was rotated. The narrowing was ipsilateral to the direction of the rotation. They noted the mechanism of this obstruction to be twisting of the vessel on its axis in the midportion of its course through the neck. They concluded that rotation of the head to the side results in torsion-compression of the ipsilateral internal jugular vein, and could have hemodynamically significant sequelae.

Present-day understanding of the pathogenesis of venous thrombosis is rooted in Virchow's triad of endothelial damage, altered blood flow, and a hypercoagulable state. Schaub, et al. (13) studied the internal jugular vein of 20 cats by scanning electron microscopy and concluded that even short periods of venous occlusion were sufficient to produce the earliest changes leading to endothelial damage and subsequent thrombosis.

They divided the cats into four groups. In group 1, the veins were surgically removed without a period of occlusion. In group 2, the veins were subjected to three five-minute periods of stasis and reflow.

Groups 3 and 4 had their veins occluded for 24 and 72 hours, respectively, prior to their surgical removal. In all group 2 veins examined, large areas of the endothelium contained adherent leukocytes not seen in the group 1, normal jugular veins. In groups 3 and 4 veins these leukocytes were noted to be migrating under the endothelium, causing endothelial disruption and exposure of the subendothelium with fibrin deposits to which platelets were adherent.

PMNs May Play Key Role

Their contention is that polymorphonuclear neutrophils (PMN) activated by venous stasis may play a key role in both endothelial damage and hypercoagulability, and that the aggregation of large numbers of PMNs occur after short periods of venous stasis.

Classically, IJVT presents as a tender neck mass deep to the sternocleidomastoid muscle, often associated with local erythema and induration. Our patient was somewhat unusual in that the mass was neither painful nor tender and was associated with dysphagia. A number of investigators have noted that IJVT is frequently clinically silent (5, 6, 9). Of 22 cases of catheter-induced IJVT reported by Chastre et al. (6), all were asymptomatic. Ahmed and Payne (5) suggest that the absence of clinical symptoms may result from the deep-seated location of the internal jugular vein, extensive available collateral circulation, and the infrequent finding of total veno-occlusive thrombosis.

Diagnosis

The diagnosis of IJVT has previously been made by venogram or venous phase arteriogram. There are a number of compelling reasons, however, why these methods should be abandoned—most notably, the necessary degree of invasivness accompanying these procedures and the risk of dislodging a portion of the thrombus with resultant pulmonary embolus.

Ultrasonograpy has been proposed as an alternative diagnostic method, but pressure from the transducer head against a tender neck mass makes this procedure less than ideal (14).

"The most significant complication of IJVT is pulmonary embolus which in the case of associated infection may represent septic emboli."

In recent years, rapid infusion contrast computed tomography (CT) has been used in the diagnosis of IJVT with excellent results (9, 14-17). Typical CT findings with IJVT include a low-density lumen surrounded by a well-defined, high-density perimeter, and increased diameter of the thrombosed vein secondary to distention of the vein by the intraluminal thrombus. These findings were well demonstrated by our patient (Figure). It has been suggested that the high density at the periphery of the thrombus represents contrast enhancement of the vessel wall via the vaso vassorum (15).

Another advantage of CT is the ability to visualize the surrounding soft tissues and identify local tumors, abscesses or small air bubbles which might indicate infection. A potential short-coming of CT is that fresh thrombus may be isodense with contrast-enhanced blood and therefore could be missed early in the clinical course.

Magnetic resonance imaging (MRI) has also been demonstrated to be effective in the diagnosis of IJVT. Braun et al. (19) diagnosed IJVT by this technique in three patients, two of whom were confirmed by CT. They point out that because this modality is sensitive to blood flow, or lack of it, there is no need for exposure to ionizing radiation or iodinated contrast material. The potential for missing an early thrombus with CT would be avoided as well. The usefulness of MRI in this context will undoubtedly rest on continued clinical trials and increased availability of the imager.

Pulmonary Embolus

The most significant complication of IJVT is pulmonary embolus which in the case of associated infection may represent septic emboli. Bradway et al. (19) found two of four patients with IJVT to have evidence of pulmonary embolus at autopsy. Ahmed and Payne (5) reported a five-per cent incidence of associated pulmonary embolus with IJVT. Dorton (11) reported an unfortunate case of fatal pulmonary embolus dislodged from the internal jugular vein at the time of surgery for a presumed acutely hemorrhagic pre-existing cystic adenoma of the thyroid.

Treatment

Treatment of IJVT is directed at prevention of embolic complications and consists of intravenous heparin administration followed by oral warfarin therapy for at least three months following diagnosis. Antibiotics have also been advocated. We elected to withhold their use in the absence of evidence of inflammation or infection.

Summary

We have presented an interesting case of position-induced IJVT and have attempted to support this concept with a review of the literature. The diagnosis was suspected on clinical grounds and confirmed by contrast CT examination. The patient was treated with four months of anticoagulation therapy. She had an unremarkable hospital course and has done well at home since her discharge.

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In Carcinoma of Rectum, Sigmoid Colon

Postoperative Radiation Therapy With Weekly 5 Fluorouracil

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JOHN C. FRICH, JR., M.D.
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Thirty-one patients with Dukes' B and C recto-sigmoid carcinoma received postoperative course of radiation therapy in the West Virginia University Health Sciences Center in Morgantown. Nineteen such patients also received weekly 5 FU, 1,000 mg simultaneously in a single I.V. bolus along with 5,000 rads in 25-28 fractions to the pelvis. The survival of 70 per cent (14/19) was better in the group of the patients receiving combination therapy than 50 per cent (6/12) of the patients receiving postoperative course to the pelvis alone. The local recurrences and the development of distant metastasis were also lower in the previous group.

The combination therapy program was well tolerated except for diarrhea, which responded satisfactorily to antidiarrheals, low-residue diet and occasionally giving rest from the radiation therapy for a few days or lowering the daily dose of radiation therapy.

Introduction

Colo-rectal carcinoma is the fourth most common cause of death due to malignant diseases in this country. The main treatment of the localized carcinoma of the recto-sigmoid is curative surgery, either an abdomino-perineal resection or anterior resection. But in the past three decades there has been only slight improvement in the survival rate by surgery alone, particularly in the Dukes' B and C disease. The most common cause of failure is due to pelvic recurrence because of implantation of the tumor cells at the time of surgery, or microscopic residual disease in the soft tissue or in the lymphatic system. Improved local control not only reduces the pelvic recurrence, but also increases the survival rate (13, 18, 24).

There are several reports suggesting that preoperative radiation therapy improves the results of surgery in recto-sigmoid carcinomas (15, 17, 20). The problems with the preoperative radiation therapy, however, are many. In most patients the staging of the tumor remains obscure because the radiation destroys the microscopic foci in the lymphatics and in the deeper muscular layer. Occasionally, the patients have Dukes' A disease in which the radiation therapy does not alter the prognosis. Sometimes peritoneal seedings, liver metastasis, or involvement of the pelvic organs are found and the planned surgery cannot be performed.

In recent years, several centers have given postoperative courses of radiation therapy in those patients who were considered to be high risk of local recurrence, usually Dukes' B and C diseases, and are finding encouraging results (5, 11, 16). Routine use of adjuvant chemotherapy alone does not alter the prognosis (6, 9, 12). However, several authors have demonstrated that the simultaneous use of 5 FU improves the effects of radiation therapy (2, 3, 6, 8, 13, 23). 5 Fluorouracil acts by inhibiting thymidine synthatase, an enzyme essential in the formation of DNA and, to a lesser extent, in the formation of RNA, both essential for cell division and growth.

Heidelberger (10) and Vermund (22) found improved effects of radiation therapy in the combination of 5 FU in implanted animal tumors. Some recent studies (4, 5, 23) have shown statistically improved results in the local control of the disease and also in the prolongation of survival for the patients who were treated by radiation therapy along with simultaneous use of 5 FU after curative surgery in recto-sigmoid carcinomas.

TABLE 1
Biopsy Reports According to Differentiation

Well differentiated Adenocarcinoma	11
Moderately differentiated Adenocarcinoma	12
Poorly differentiated Adenocarcinoma	7
Undifferentiated Adenocarcinoma	1
TOTAL: 31 patients	

Materials and Methods

This report deals with 31 patients with carcinoma of the recto-sigmoid, treated with postoperative adjuvant radiation therapy between 1978 and 1983 in the Radiation Therapy Department of the West Virginia University Medical Center in Morgantown. There were 21 men and 10 women. All of the patients were white except for one who was black. The age of the patients ranged from 29 years to 84 years, with the mean age of 62 years.

All patients had curative resection. Twenty-three underwent combined abdomino-perineal resection, and eight patients had anterior resection. All patients had adenocarcinomas. The grades of the tumors are given in Table 1. The patients were staged according to Astler-Coller's modification of the Dukes' Classification (Table 2).

All patients started radiation therapy four to six weeks after resection. The patients usually received 5,000 rads in 25 to 28 fractions over a period of five to six weeks to the entire pelvis by parallel opposing portals or by four field pelvis box technique by using either a TheraTron 80 Cobalt 60 Machine or a four MeV Linear Accelerator. All patients were treated in the prone position. The radiation volume extended from the upper edge of the sacrum to the lowermost projection of the perineal skin and one cm beyond the bony pelvic outline.

In most of the studies, 5 FU has been used along with radiation therapy during the first and the last three to five days of the treatments. In such studies, the patients did not receive any 5 FU during most of the radiation therapy treatments. We elected to use 5 FU by a single intravenous bolus of 1,000mg once a week. Nineteen patients received 4,000 to 5,000 mg of 5 FU in divided doses. This regimen was selected because there should be enough sensitization of the cells during the entire course of radiation therapy. A complete blood count was done before each of 5 FU, which was given only when the blood counts were satisfactory.

TABLE 2
Retrospective Staging of the Disease According to Astler-Coller Modification of Dukes' Classification.

Stage	*Description*	*Number of Patients*
Stage A	Lesion limited to mucosa.	None
Stage B_1	Lesion extended through mucosa with negative nodes.	1
Stage B_2	Lesion extended through the entire thickness with negative nodes.	9
Stage C_1	As B_1, but with positive nodes	3
Stage C_2	As B_2, but with positive nodes.	18
	TOTAL PATIENTS	31

Results

At the time of this report, there was a 65-per cent (20/31) survival rate in the total population with an average follow-up of 36 months. Five of the 31 patients failed locally in the pelvis. Six patients developed

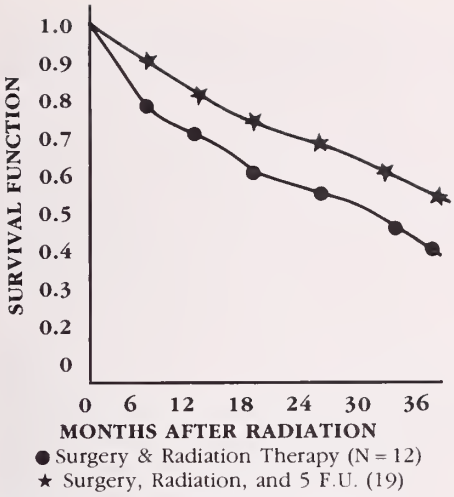

FIGURE. Recto-sigmoid carcinoma: Surgery, post-op Radiation +/– 5 F.U.

metastasis in distant sites, most commonly in the liver, bones, lungs, and brain. The metastasis usually developed 10-12 months after the completion of treatment.

Seventy per cent of the patients receiving postoperative pelvic radiation therapy and weekly 5 FU survived for 36 months as against only 50 per cent receiving pelvic radiation therapy alone. (Figure). The survival, local recurrence and development of distant metastasis are noted in Table 3. It is apparent that the patients receiving weekly 5 FU simuntaneously along with pelvic radiation therapy had better survival (70 per cent), lesser recurrence (2 of 19) and less development of distant metastasis (3 of 19) as compared to the patients who were treated by pelvic radiation therapy alone. The latter demonstrated 50 per cent survival, 25 per cent (3 of 12) failure in the pelvis, and 25 per cent (3 of 12) development of distant metastasis.

Table 4 demonstrates the number of patients according to Astler-Coller modifications of pathologic staging of Dukes' classification. None of the patients had Stage A and B_1 disease. Thirteen of 19 patients (67 per cent) with Stage C_2 were treated with radiation therapy and 5 Fu. Five of 12 patients (42 per cent) with Stage C_2, and six of 12 patients (50 per cent) received pelvic irradiation without any 5 FU.

Table 5 summarizes the side effects seen during the course of the treatment. Reaction to the combination treatment consisted mostly of diarrhea. This was controlled by a low-residue diet, Lomotil or Immodium tablets and occasionally giving rest from the radiation therapy for a few days and/or lowering of the daily dose of radiotherapy. Evidence of bone marrow depression resulting in leukopenia was seen only in one patient, but the WBC count came back to normal limits after two to three weeks of treatments. One patient developed moderate moist desquamation in the intergluteal cleft and inguinal fold regions but responded satisfactorily to the local application of acid mantle cream with one per cent hydrocortisone.

None of the 31 patients had small bowel obstruction due to the late effects of radiation therapy. No patient suffered from pelvic abscess or fistula.

TABLE 3

Treatment Modality	*Number of Patients*	*Survival*	*Local Recurrence*	*Distant Metastasis*
Postoperative pelvic radiation therapy with weekly 5 FU.	19	14/19 (70%)	2/19 (1%)	3/19 (15%)
Postoperative pelvic radiation therapy alone.	12	6/12 (50%)	3/12 (25%)	3/12 (25%)

TABLE 4

Number of Patients According to Astler-Coller Modification of Dukes' Staging in Both Groups

Stage of Disease	*Patients treated with Radiotherapy and 5 FU* *19 patients*	*Patients treated with Radiation Therapy only* *12 patients*
A	None	None
B_1	None	None
B_2	4 (22%)	6 (50%)
C_1	2 (11%)	1 (8%)
C_2	13 (67%)	5 (42%)

TABLE 5

Complications During Treatment

Nature of Complications	*Complications seen in Patients Receiving Both Radiation Therapy and 5 FU—Total Patients: 19*	*Complications Seen in Patients Receiving Radiation Therapy Alone—Total Patients: 12*
Severe Skin Reaction	1	None
Moderate Diarrhea	6	2
Severe Diarrhea	3	2
Moderate Nausea/Vomiting	1	1
Severe Nausea/Vomiting	None	None
Tenesmus	1	None
Leukopenia	1	None

Discussion

In this country, 16,000 patients die every year of carcinoma of the recto-sigmoid. Approximately 50 per cent of the patients die with active disease. The traditional main treatment of the localized recto-sigmoid carcinoma is surgery which

yields an overall survival rate of 50 per cent. Improved survival and reduced local recurrence is seen when adjuvant radiation therapy is used (5, 11, 17, 19, 20). Chemotherapy alone as an adjuvant basis with surgery has been found ineffective in the improvement of survival or in preventing the spread of the disease to the distant organs (9).

Preoperative radiation therapy in eligible surgical patients followed by radical surgery such as abdomino-perineal resection or anterior resection has shown better survival rate than by surgery alone, especially in Dukes' B and C diseases (13,20). Rider et al. (17) found that even a simple single dose of 500 rads to the pelvis a few hours before surgery in Dukes' C carcinoma of the rectum improved the survival to 34 per cent as against 18 per cent treated by surgery alone.

There are many reports that postoperative radiation therapy decreased the incidence of local recurrence and increased the overall survival (5, 11). Gunderson, et al. (5, 7), reported 82-per cent survival in Dukes' B disease and 50-per cent in Dukes' C disease when postoperative radiation therapy was given as against 65-per cent in Dukes' B and 25-per cent in Dukes' C by surgery alone.

Use of 5 FU

In order to improve the radiosensitivity, several chemotherapy drugs such as Thiotepa, Chlorambucil, Cyclophosphamide, Mitomycin and even Hyperbaric Oxygen (21) have been used in recto-sigmoid carcinomas, but, so far, regression has been seen only with 5 FU which inhibits the formation of DNA and RNA. There have been several methods of using 5 FU with radiation therapy. In most series (3, 4, 5, 23), 800 to 1,000mg of 5 FU have been used daily on the first and the last three to five days of radiation therapy. It was observed in such treatment programs that the immediate and late complications such as diarrhea, moist desquamation of the skin, subcutaneous fibrosis and bowel stenosis were increased.

We decided to use 5 FU in a moderate dose of 1,000mg on a weekly basis in a single I.V. bolus. Such treatment regimen was very well tolerated. The complications that we observed were less than in the other series.

The ECOG study reported by Danjoux (4) observed more severe reactions when radiation therapy was combined with 5 FU and Methyl CCNU in high doses. Seven of the 16 patients failed to complete the planned treatment because of toxicity and late bowel complications occurring in seven out of 30 patients. Arnott (1) also observed that the severity of the complications experienced by patients receiving 5 FU along with the pelvic radiation depended upon the dose and method of use of 5 FU. Patients receiving 500mg of 5 FU on alternate days had experienced more diarrhea, nausea and vomiting as compared with those receiving 250mg only.

Combination Treatment Results

In the recent publication of the results of the G.I.T. Study Group (5) on the combined use of radiation therapy with or without 5 FU and Methyl CCNU as post-surgery adjuvant basis, it was clear that the patients receiving the combination treatment in Dukes' B and C disease had a five-year survival of 56 per cent as against 36 per cent in the control group without receiving any adjuvant treatment, or only 46 per cent in the group receiving radiotherapy or chemotherapy alone. There was marked reduction in the incidence of local recurrence in patients receiving combination of radiation therapy and chemotherapy (33 per cent) than by surgery alone (55 per cent) or by combination of surgery with radiotherapy or chemotherapy (46 per cent).

In our series, the average survival seen was 70 per cent (14/19) for three years in the patients who received combination of postoperative radiation therapy to the pelvis and weekly 5 FU. Only two of the 19 (10 per cent) failed locally in the pelvis, and three patients developed distant metastasis. This data was comparable with those of the G.I.T. Study Group, indicating that the combined modality treatments appear to be better than the postoperative use of radiation therapy alone.

In summary, postoperative radiation therapy to the pelvis along with weekly use of 1,000mg of I.V. bolus of 5 FU for Dukes' B and C disease of the recto-sigmoid demonstrates promising results in reducing the local recurrences and improving the survival. This is primarily because of the additive effects of both radiation therapy and 5 Fluorouracil. Such a treatment program was simple and well tolerated.

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Medical Grand Rounds

West Virginia University Health Sciences Center

Edited by Irma H. Ullrich, M.D., Professor of Medicine

Temporal Arteritis

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Temporal arteritis is one of the clinical manifestations of giant-cell arteritis, and is a serious disease that commonly affects the elderly. Features such as headache, jaw claudication, visual loss, malaise, a palpable and tender temporal artery, fever, an elevated ESR and anemia should alert the physician to the diagnosis, which should be confirmed by biopsy.

Treatment with prednisone at one mg per kg per day should be instituted promptly, even before the biopsy is performed in order to minimize visual loss.

Patients should be informed of the potential for blindness and even death resulting from the arteritis as well as the risk of complications from long-term, high-dose corticosteriod therapy. However, most patients with temporal arteritis who are treated appropriately do well.

Case Report

A 73-year-old woman presented to her family physician in early May complaining of five days of fever (as high as 103 degrees), night sweats, malaise and anorexia. She denied cough, diarrhea or abdominal complaints, dysuria or focal pain. Over the next three weeks she lost 10 pounds and developed a temporal headache. She was studied extensively and had ESRs of 119 and 121 mm/hr, guaiac-negative anemia with normal RBC indices, elevations of alkaline phosphatase and AST to twice normal, sterile urine, blood and sputum, a nonreactive PPD but reactive anergy panel, normal chest radiograph, normal upper gastrointestinal and barium enema studies, normal ERCP and abdominal computed tomography, and a normal liver biopsy.

> ***"An elevated ESR is probably the most consistently abnormal laboratory test, with three per cent or less of patients having an ESR below 50 mm/hr."***

Laparotomy was planned, but she was seen in consultation by the rheumatology service. She had all the prior symptoms including the left temporal headache, and had developed hip and shoulder girdle myalgias. She denied jaw claudication or visual disturbances.

She was frail and febrile (38.5), weighed 51 kg, and was tachycardic without tachypnea. Blood pressure was normal without postural change. She had no adenopathy nor rash, normal chest, abdominal, pelvic and rectal examinations, and guaiac-negative stool. She had no synovitis or joint tenderness, but had reduced motion of her hips, shoulders and neck without radicular symptoms. Her left temporal artery was prominent and tender. Occlusive pressure at the preauricular area decreased her headache. Her vision and fundoscopic examinations were normal, as was her speech.

She had a left temporal artery biopsy that day which demonstrated giant-cell arteritis. She was started on 15 mg prednisone every six hours. Within 12 hours her headache and fever were gone and she ate dinner without incident, saying she *had* had jaw claudication for two months, so long that she had become used to it. After two days her prednisone was consolidated to 60 mg qAM, and after two weeks decreased to 50 mg qAM. Over the next four months her dose was gradually tapered to 20 mg. Her ESR fell to 50 mm/hr by the first week of therapy and to five mm/hr while still on 50 mg qAM. At the 20 mg dose her ESR jumped to 60 mm/hr and she was found to have a fasting blood glucose of 210, glycosuria and an *E. coli* urinary tract infection. These were treated and the ESR fell to 45. The ESR wavered between 40 and 50 for two months despite the extraction of a carious tooth after an aggressive workup for occult infection.

She had no recurrence of her temporal arteritis or polymyalgia rheumatica symptoms, so the prednisone was further tapered by 2.5 mg decrements, and the ESR fell to 25 mm/hr. She experienced two separate atramautic rib fractures and one vertebral crush fracture, but 13 months after diagnosis she was off the prednisone, her ESR was 19 mm/hr, and her vision was normal despite an early right posterior subcapsular cataract.

Historical

James Hutchinson is credited with first describing temporal ateritis (18), but it was Horton et al. (15) who provided the first comprehensive description of the clinical manifestations of temporal arteritis, and em-

phasized that headache and jaw claudication were important diagnostic clues. Birkhead et al. (3) were the first to document the efficacy of corticosteriods in the treatment of this condition. The term giant-cell arteritis (GCA) has been used 1) synonomously with temporal arteritis (TA), 2) as a diagnostic category encompassing both temporal arteritis and Takayasu's arteritis, or 3) as including both temporal arteritis and polymyalgia rheumatica (PMR). Many of the studies in the literature have combined patients with temporal arteritis and PMR, so one must be cautious when interpreting incidence and prevalence data, or success and complication rates.

Temporal arteritis is a giant-cell vasculitis with profound systemic manifestations affecting muscular arteries, usually the aorta and its branches. Polymyalgia rheumatica is a systemic inflammatory condition without demonstratable vasculitis. It is characterized by severe myalgias, aching and stiffness, most commonly in the proximal musculature such as the shoulder and pelvic girdles. Anemia and an elevated sedimentation rate (ESR) are usually present. PMR is often associated with other systemic inflammatory disorders such as rheumatoid arthritis.

TABLE
Manifestations of Temporal Arteritis[1]

Symptoms/Signs	*Initially (%)*[2]	*Overall (%)*[3]
Temporal pain or headache	40	32-100
Tender temporal arteries	18	3-91
Pulseless artery	30	23-72
Polymyalgia rheumatica	29	20-86
Jaw or tongue claudication	5	2-67
Limb claudication	4	3-43
Visual loss	12	7-52
Permanent blindness	7	7-66
Arthralgias	15	15-30
Fatigue, Malaise	5	12-97
Fever	15	15-98
Weight loss, Anorexia	15	2-69
Elevated ESR (>50 mm/hr)	99	100
Anemia	48	15-82

1 Compiled from multiple publications (2, 5, 9, 11, 14, 17).
2 Average rate at presentation
3 Frequency during the entire course of the illness

Epidemiology

Temporal arteritis is a common disease in the elderly. It affects women two to three times more frequently than men. It is most common in persons 70 to 80 years old, and uncommon in those younger than 50. The incidence in the general population varies from study to study, ranging from 2.4/100,000/yr (17) to 21.5/100,000/yr (4), and may, in fact, be increasing with time (17). Interestingly, in one large necropsy study of 2,183 temporal arteries, the calculated incidence was 2/100,000/yr (21). The incidence is much higher in those over 50, ranging from 17.4/100,000/yr (17) for Olmsted County, Minnesota, to 76.6/100,000/yr in Denmark (4). Prevalence is close to 135/100,000 for those over 50, and even higher in the 70- to 79-year-old group (17).

Clinical Characteristics

The classic presentation of a patient with giant-cell arteritis includes headache, jaw claudication, malaise, depression, myalgias, arthralgias, stiffness, fever, anemia and an elevated ESR. The Table is a compilation of many reports describing the manifestations of giant-cell arteritis. The signs and symptoms of a single patient at presentation are often somewhat atypical, but between presentation and diagnosis, most patients will display the major features of the disease.

The disease has been grouped into several categories of presentations: 1) classic GCA described above, 2) focal TA including headache, tender temporal artery, jaw claudication, anemia and elevated ESR, 3) TA with systemic involvement (fever, malaise, weight loss), anemia, and elevated ESR, 4) PMR with occult temporal artery inflammation, and 5) occult TA. The patient presenting with the classic constellation of signs and symptoms should promptly have a temporal artery biopsy and receive appropriate treatment. The patients that fall into the other four groups may require more time and testing to make the diagnosis, which may take from one month to four years (5, 11,17).

With respect to group 2, how useful are signs of temporal artery involvement such as palpable tenderness, jaw claudication or visual symptoms as diagnostic clues? Sorensen et al. (24) examined 63 patients with TA or PMR, 58 of whom were biopsied. They found histological evidence of GCA in 80 per cent; seven of these required two biopsies for diagnosis. Only 50 per cent of these biopsy-positive patients had local symptoms or signs of TA. One fourth had local and systemic (PMR) features, and 25 per cent had systemic features without local TA findings.

One of the difficulties in treating patients for PMR, which responds to non-steroidal antiinflammatory agents or *low-dose* corticosteroids, is the possibility of asymptomatic temporal arteritis, which requires *high-dose* corticosteriod therapy. Retrospective analysis may indicate that temporal arteritis had been present in some cases. However, Chuang et al. (7) and Healey and Wilske (13) reported occult temporal arteritis in 15 per cent and 20 per cent, respectively, of their patients who otherwise had PMR. Fauchald et al. (9) described the difficulty in making a definite distinction between PMR alone and PMR with temporal arteritis, and argued for treating all of these patients with similar regimens of corticosteroids.

The fifth group of patients are those that present with only nonspecific signs and symptoms,

but do in fact have temporal arteritis. Healy and Wilske (13) reported 28 patients who presented without any of the cardinal features of temporal arteritis or PMR. All had an ESR about 60 mm/hr, three presented with unexplained anemia with normal indices, four with neurological abnormalities, two with limb claudication, 12 with fever of unknown origin and night sweats without chills, and seven with a "malignoid" syndrome of low-grade fever, malaise, anorexia, weight loss, anemia and abnormal liver enzymes. All were eventually diagnosed as having giant-cell arteritis by temporal artery biposy.

Although headache is present in a third of patients at the onset, and occurs in almost all at some time in their course, neither the presence nor the location of the headaches is a completely reliable diagnostic clue. Solomon and Cappa (23) studied the headaches in 24 biopsy-proven cases. Thirteen had bitemporal headaches but only six had purely temporal headaches. Half had either no headache, lacked temporal symptoms or had generalized headache.

Arteritis of the aorta and its main branches accounts for less than two per cent of biopsy-proven cases, but is important to consider, especially when limb claudication is a presenting symptom (19). Large-vessel involvement may be documented clinically by decreased or absent pulses, bruits, claudication, paresthesias or Raynaud's phenomenon, or by radiographic means. There are numerous cases in the literature of aortitis and even aortic rupture, many not diagnosed antemortem (9, 11, 17, 19,22).

The frequency of neurologic findings in temporal arteritis varies, and ranges from ophthalmologic in 69 per cent (of those with neurologic involvement) to peripheral or mononeuropathies in 45 per cent, carotid and vertebrobasilar distribution cerebral ischemic events in 24 per cent, neuro-otologic syndromes in 22 per cent, tremor in 12 per cent, to neuropsychiatric syndromes in 10 per cent (6). Blindness is the dreaded complication of temporal arteritis, and in earlier reports was a frequent occurrence (3, 11). Although the rate of permanent visual loss is much lower now, it is still about 10-15 per cent (6, 17).

Ocular complications differ depending on the location of the arteritis. Some patients present with amaurosis fugax while others have ptosis, diplopia, scintillating scotoma or various field deficits (6). After central retinal artery occlusion, the retina is pale and the macula, cherry red. Anterior ischemic optic atrophy presents with hemorrhage around a pale, swollen disc. In ischemic retrobulbar neuritis the retina and optic nerve appear normal despite visual loss. Regardless of the specific presentation, empiric corticosteroid therapy should not be withheld in most cases and the diagnosis firmly established as rapidly as possible.

Laboratory testing: An elevated ESR is probably the most consistently abnormal laboratory test, with three per cent or less of patients having an ESR below 50 mm/hr (14). There have been rare reports of temporal arteritis with normal ESR (11). Mild abnormalities of liver enzymes and of liver function testing have been documented (8, 20). Prothrombin and sulfobromophthalein retention times can be prolonged as well. Liver biopsies have shown slight Kupffer cell proliferation, mild fatty change, and rarely, slight portal tract fibrosis and round cell infiltration.

"Although the rate of permanent visual loss is much lower now, it is still about 10-15 per cent."

Diagnosis

In an early patient with the clinical features and elevated ESR which suggest giant-cell arteritis, the question is whether to biopsy a temporal artery or not. Hall and Hunder (10) reviewed this issue and concluded that temporal artery biopsy is prudent when giant-cell arteritis is suspected because of the diagnostic utility of the biopsy results and the risks of empiric, long-term, high-dose corticosteroid therapy in a group that is predominantly postmenopausal women.

Townes and Blodi (25) reviewed 10 years of temporal artery biopsies and studied those that were normal or had atherosclerotic changes to determine clinical outcome. These patients had visual loss or severe headache, and most had an elevated ESR. Many received vigorous corticosteroid therapy despite a negative biopsy, but all did poorly. The authors concluded that 1) the clinical constellation of headache, visual loss and elevated ESR was no substitute for a positive biopsy, 2) severe temporal artery atherosclerosis was frequently associated with bilateral optic nerve involvement, and 3) that patients with severe atherosclerosis and loss of vision had an early death from diffuse atherosclerosis. Thus, corticosteroid therapy in this group, which was not indicated on the basis of temporal artery biopsy, was probably harmful.

Studies of the therapeutic significance of temporal artery biopsy have shown that it correctly identifies the arteritis (or absence of) in greater than 90 per cent of cases (1, 10). Further, no combination of signs, symptoms, or ESR elevation appears to be as accurate as a biopsy (1, 9). Clinical suspicions not allayed by the initial negative result may demand a second biopsy. An additional 15 per cent of patients may be correctly diagnosed as having arteritis in this way (10, 24). The value of the biopsy lies not only in being able to establish a diagnosis, but in the support it provides the physician faced with subsequent complications of high-dose, long-term corticosteroid therapy.

Pathology

Histologic involvement in giant-cell arteritis is segmental, and the pathologist requires an adequate specimen (four-six cm) from which multiple sections should be made. Although only the temporal artery is examined, the vertebral, ophthalmic and posterior ciliary arteries show severe arteritis in 75 per cent or more cases. Aortitis is a rare cause of death, but a fairly common finding at autopsy as is involvement of

the carotid, subclavian, coronary and femoral branches of the aorta. Microscopic changes include 1) infiltration of the vessel wall with lymphocytes and plasma cells, 2) multinucleated giant cells in the region of the internal elastic lamina, 3) medial injury and varying degrees of healing fibrosis, 4) minimal focal necrosis, and 5) intimal proliferation, luminal occlusion and occasionally recannulization.

Therapy

Clinicians have little reason to debate whether these patients require treatment, because they are ill and we know that untreated giant-cell arteritis can result in permanent blindness and even aortic rupture. The question is how much and for how long. The utility of corticosteroids in the treatment of temporal arteritis and the prevention of blindness has been documented fairly well (3, 12, 14). Daily corticosteroid therapy has been shown to be superior to alternate-day regimens in a randomized, prospective study (16).

Most authors now recommend starting oral prednisone at about one mg/kg/day, and continuing for at least one month, at which time symptoms have improved and the ESR has usually fallen significantly. The dose of corticosteriod can be tapered by about 10 per cent per week based on clinical response and change in ESR. Intercurrent infections may cause the ESR to increase, and corticosteroids may mask some of the routine features of infection. The arteritis itself may flare or the patient may experience new or recurrent PMR symptoms, the treatment of which may necessitate a brief increase in the dose of corticosteroid. The patient should be told at the outset that treatment usually takes about a year and that mild flares are common.

Healey (12) has shown that patients treated for at least one month with at least 50 mg of prednisone per day have a very low risk for blindness, although some may experience elevations in ESR or symptoms of PMR without a flare of their temporal arteritis. Conversely, Save-Soderberg et al. (22) reported a series of nine fatal cases of giant-cell arteritis. Some of these patients had not been treated, some were treated with less than 50 mg per day, and some were treated only briefly. Two patients had giant-cell coronary arteritis and myocardial infarction, two had aortitis and dissecting aneurysms, and five had cerebrovascular accidents. Relapse rates of up to 25 per cent (17) have been reported, but these data suffer from diversity in treatment regimens. Beevers et al. (2) emphasized the need for prolonged treatment, citing an 88-per cent relapse rate, some occurring after five years. They documented active arteritis on biopsy after and even during therapy, but their patients received maximal doses that would today be considered moderately low.

The complications of prolonged, high-dose corticosteroid therapy are well known and should be anticipated and discussed with these patients. However, such iatrogenic risks should be put in perspective with the potential for blindness or stroke, and death from aortitis and coronary arteritis. Vertebral compression fracture occurs in some 26 per cent and cushingoid changes in 41 per cent (17). Diabetes mellitus, hypertension, posterior subcapsular cataracts, ischemic necrosis of bone, upper gastrointestinal hemorrhage, purpura, steroid myopathy, and infections such as shingles, pneumonias, pyelonephritis or meningitis all occur with an increased frequency in patients so treated (11). Some complications are unavoidable, but with patient education and regular followup the frequency and severity of adverse effects can be minimized.

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President's Page

"Remember, the miracle is in the doing!"

Circle the Wagons

Guest author: Mrs. Virginia (Ginny) Reisenweber (Harvey D.), Martinsburg, President, West Virginia State Medical Association Auxiliary.

I'm sitting in the pool balcony watching the swim team practice as it's my night to drive the swim team carpool. The slap, slap rhythm of the water helps me gather my thoughts for this page. My thoughts of elections, auxiliary, what to fix for dinner, and the children's sermon for Sunday all run through my mind at one time. I am reminded of an article I read in the *US Air* Magazine written by former Senator Jennings Randolph. Mr. Randolph is writing about the importance and responsibility we have of voting. One vote *does* make a difference just as one more member of our medical society or auxiliary *does* make a difference.

Rutherford B. Hayes was elected President of the United States in 1876 by one vote of the electoral college, and the military draft was approved by a single vote in congress. And yet, Ronald Reagan was elected by fewer than half of the voters who were eligible to vote. How can those who do not participate in the voting process complain about the outcome?

The same holds true for the medical society and auxiliary. On the local, state, and national levels, we who depend upon, and who are interested in, medicine and where it is going, need to participate. We need to belong, to voice our opinions, to care, and show our support. Medicine is the center of our lives—after all it's our bread and butter. If we don't care, who will? We must belong, we must participate, and we must care.

Think of the snowflake—each one is unique and different—just as we are. One on the ground is crushed but when these snowflakes stick together, look at the impact made—things happen, things change. We, too, can make an impact, and make things happen or change by sticking together, by belonging.

In my acceptance speech I compared medicine and its problems of today to the pioneers traveling across this great land in covered wagons. When the Indians attacked, the wagons were circled, and the pioneers (both men and women) fought together from inside. Today, we also must stick together to fight the flaming arrows of frivolous malpractice suits, mandatory assignment, DRGs, teen pregnancy, smoking, AIDS, nursing shortages, and countless other health-related problems. We must fight *for* availability and affordability of medical professional liability insurance, additional tort reforms, and a mandatory seat belt law for adults in West Virginia.

This takes UNITY—we need to have a unified membership in our county, state, and national organizations. We need to be involved, to support our organizations and their elected leaders in order to control the destiny of medicine. We must be part of the action, as one vote *does* make a difference. One more member really *does* count. When membership increases just as the snowflakes mount up, we will be able to make an impact on, and control the future of, medicine.

In Ecclesiastes 3 we read that "There is a time for all things." There is a "time to be born and a time to die, a time for tearing down and a time for building up, a time to sow and a time to reap, a time to be silent and a time to talk. NOW is the time—the time for us to belong, to speak out and be heard, and to join our medical society and auxiliary. We must continue to work together, to protect medicine together, and to give the best that is in us to medicine and medical care. To belong and to be involved is to believe, to believe is to care, to care is to love, and to love is to do. Remember, the miracle is in the doing!

Medical Care Costs

Currently popular is the habit of claiming physician fees are increasing faster than inflation rates, a phenomenon which escapes physicians who see their fees as tightly controlled by government and third-party payors. If one were to believe the news accounts, the impression is that somehow doctors just decide every few weeks or months to jack up fees by five or 10 per cent. These increases then cause Blue Cross/Blue Shield to impose 20- or 50- or more per cent premium increases.

What fallacious reasoning!

The truth is most doctors adjust their fees annually. Many physicians adjust less frequently while others have given up the game entirely and have resigned themselves to taking only the reimbursement increases granted by government or third parties.

For those physicians who do raise fees in an effort to cover their ever-increasing costs, there is no assurance that government or third parties will increase payment levels by a corresponding amount—in fact, it is a rarity that reimbursement from a third-party payor ever increases more than small percentage points.

Just because the doctor decides to raise a fee from $50 to $55 does not mean that third parties will raise their payment level from $40 to $45. If insurer or Medicare payment levels are set at the $40 level for that $50 service, the five-dollar increase by the physician means nothing.

Medicare Maximum Allowable Actual Charges (MAAC) regulations severely restrict any physician's ability to adjust his fees. Most physicians clearly know and understand that government allowed but a one-per cent increase in Medicare payments last year, and that was to participating physicians only. Non-par doctors received only a one-half-per cent increase in payment levels. That means that on a service for which Medicare may reimburse $800, the allowable increase for a participating doctor was $8, and for a non-par doctor the increase was $4. These are not increases which justify third parties raising their premiums 30 or 40 per cent!

What third parties do not want to admit is that they are paying out more in total dollars because of either more claims, greater numbers of services or a host of other reasons. Never mind that some insureds may be sicker, that there are increasing numbers of elderly and there are more physicians available to care for people who may not have been seen previously. And what about the cost of government regulation?

There is no question but that the volume of services is going up. Whether all services offered are totally necessary or medically justified might be the proper subject of debate in the proper forum. But to say that physicians' fees are causing the increased payout for government or insurers is clearly not the case.

Much was made late last year of the 38-per cent premium increase for Medicare recipients, and physician fees were unjustly blamed for the increase. The fact was that the Reagan administration had chosen not to increase the premium for two years, high-tech treatment and general inflation accounted for some of the increase, and greater numbers of patients were receiving care on an out-patient or ambulatory-setting basis which government itself had encouraged through the prospective payment system used for hospitals.

The total volume of patients served increased as physicians responded to the edicts of third-party payors to provide services outside the hospital setting and not because doctors suddenly boosted their fees for those services in some dramatic fashion.

Government obviously subscribes to the theory that as the numbers of patients go up and the dollars paid out increase due to more people receiving more services, the way to hold down costs is to restrict more tightly fees paid for those services. (As more and more Americans own and drive cars, why doesn't government force manufacturers to accept less per vehicle sold?) While volume business works well in various manufacturing and retail settings, the labor intensiveness of delivering health care services simply does not correspond.

Doctors may be able to squeeze in a few more patients per day in an effort to keep income stable in the face of less reimbursement per patient, but there are only so many work hours in a day. And where does the doctor reach the point of diminishing returns when disgruntled patients who perceive they were rushed through the medical encounter turn to their friendly lawyer to launch a professional liability suit?

Let's not lose sight of the fact that the physician portion of the health care dollar spent has remained consistently at 20 per cent for the past 10 or more years. The average physician overhead is now

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at or very near the 50-per cent level. Thus, only 10 per cent of the total health care dollar actually goes to the doctor. And if every doctor in America worked for nothing and didn't have to pay for a mortgage, educate his children, drive a car or eat, America's total health care expenditure would decrease only 10 per cent.

Then who would government, insurers and the public blame for health care costs?—MGS

Food Labeling

Consistent and accurate information is needed on food labels, and The American Dietetic Association, in a statement issued October 4, called for a thorough review of all labeling proposals, whether legislative or regulatory in nature.

According to the statement, which was approved at ADA's 71st Annual Meeting in San Francisco, "The American public is bombarded with a confusing array of directives and advice about nutrition and health. It is important that the public have consistent and accurate information on food labels to be able to make informed food choices."

ADA explained that legislation on various labeling issues has been introduced during the 100th Congress, with no action to date. These include: "lite" and lean labeling, tropical oils, fast food ingredients, and expanded nutritional information. Similar issues, including mandatory labeling, should resurface next year.

According to the statement, "At the same time, ADA recognizes that there is a limit to both the amount and usefulness of all possible information on a package label. Therefore, ADA supports a thorough review of all labeling proposals . . . to assure that the public receives appropriate and useful nutrition and ingredient information on the foods they purchase."

Health claims on food packages is another issue facing the Food and Drug Administration (FDA), with a final rule expected before the end of this year. However, in its statement, ADA said it does not feel the current FDA proposal best serves consumers. "The public must be provided with truthful, non-misleading information that is based on a preponderance of scientific evidence. The current FDA proposal does not provide consumers with these assurances.

"ADA believes health-related messages must convey the importance and function of total diet over time, not individual foods, and reflect prudent dietary recommendations . . . Health claims labeling should assist the public to integrate specific food products into a well-balanced diet, avoiding distortion of dietary habits and preoccupation with specific diseases."

In another area, ADA found the FDA proposal on cholesterol labeling to be "thorough and comprehensive" and suggested minor changes. A final rule is pending from FDA.—*Guest Editorial by American Dietetic Association*

Our Readers Speak

To Be or Not to be a Surgeon

The study of Medicine entails four years of undergraduate schooling and four years of rigorous medical learning. Graduation from the college of medicine is simply a commencement to becoming a full-fledged physician, for completion of residency training is required to practice medicine. Residency training takes three to seven years depending on the particular specialty program. Nowadays, because of limited residency training programs, medical students are prodded to decide early on a specialty.

To be or not to be a surgeon is a question for most medical students. To become a surgeon requires knowledge of anatomy, understanding of pathology, perception of physiology, vision of radiology, awareness of anesthesia, insight of radiotherapy, dose of chemotherapy, quickness of analysis, conciseness of writing, and most of all, skill of hands.

A surgeon rises early, retires late, and eats fast. Since surgery is physical, a surgeon stays fit to operate decisively, precisely, and expeditiously. Because of rapid advancement in technology, a surgeon keeps abreast with new surgical methods, tools and materials. Surgery demands constant practice, repeat procedures, and a knowledge of current literature to achieve excellence. A surgeon takes risks for the decision, the incision, and the situation in managing surgical patients. To be or not to be a surgeon is always a question for medical students. C'est la vie.

Romeo Y. Lim, M.D.
1306 Kanawha Blvd., East
Charleston, WV 25331

'Unstable Miocardium' Discussion Area for 1989 'Mid-Winter' Speakers

"Unstable Miocardium" is the general title of the concluding Sunday morning, January 29, session of the 22nd annual Mid-Winter Clinical Conference.

Speakers and topics for this session of WVSMA's weekend CME gathering in Huntington will be Drs. Stafford G. Warren, Charleston, "Current Status of Coronary Angioplasty;" Harold Selinger, Charleston, "Thrombolytic Therapy," and Ronald C. Hill, Morgantown, "The Evolution of Coronary Artery Bypass Graft."

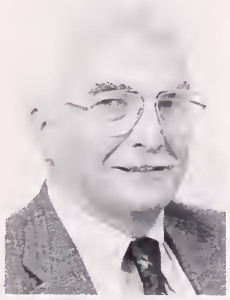
The conference will open Friday afternoon, January 27, at the Holiday Inn-Huntington-Gateway. Co-sponsors are Marshall University and West Virginia University schools of medicine.

Other Subjects

The Friday afternoon session will focus on "Occupational/Industrial Medicine," with talks scheduled on low back problems—management, treatment and research of low back syndrome; and noise-induced deafness.

The traditional Friday evening physicians' session will feature speakers on professional liability.

The Saturday morning session will be a "Potpourri" of topics including sociopolitical aspects of AIDS, relative value study, and insurance benefit management programs while Saturday afternoon's program will take a look at "Surgery: A Changing Discipline." Included in this session will be papers on trauma, breast masses and, as reported previously, "Reversal of Coronary Artery Disease: Fact or Fantasy?," by Caldwell B. Esselstyn, Jr., M.D., from The Cleveland Clinic Foundation.



Selinger

Hill

Doctor Warren, Clinical Professor of Medicine, WVU Health Sciences Center, Charleston Division, is Medical Director of Cardiac Rehabilitation, the CCU and MICU at Charleston Area Medical Center, Memorial Division.

He was graduated from Davidson (North Carolina) College, did graduate work at Wesleyan University in Connecticut, and received his M.D. degree in 1969 from the University of Rochester.

Doctor Warren completed his internship and residency in medicine at the University Hospitals of Cleveland, and a fellowship in cardiology at Duke University.

Heart Institute Director

Doctor Selinger is Medical Director of the Heart Institute of West Virginia in Charleston and WVU Clinical Professor of Medicine and Cardiology. He was Governor of the American College of Cardiology for West Virginia in 1984-88, and is a past member of the CAMC Executive Committee and Board of Trustees.

Born in New York City, Doctor Selinger was graduated from Brooklyn College, and received his M.D. degree in 1953 from the State University of New York, Downstate Medical Center, College of Medicine. He interned at Maimonides Hospital in Brooklyn, and completed a residency in medicine and fellowship in cardiology and cardiopulmonary laboratory at the Jewish Hospital of Brooklyn.

He is certified by the American Board of Internal Medicine and the Subspecialty Board of Cardiovascular Disease, and is a Fellow of the American College of Medicine, American College of Cardiology, and American College of Chest Physicians.

Doctor Selinger was Program Chairman for "Angioplasty Update '88," a live demonstration course in angioplasty held at CAMC.

WVU Honor Graduate

Doctor Hill, a native of Parkersburg, joined the staff of WVU School of Medicine in 1985 as Assistant Professor of Surgery. He was graduated from WVU with high honors as a member of Phi Beta Kappa, and completed WVU School of Medicine in 1974 on a Board of Governors Academic Scholarship.

Doctor Hill completed a residency in general and thoracic surgery at Duke University Medical Center where he also was a Research Fellow in Dr. Andrew S. Wechsler's Cardiovascular Laboratory and Teaching Scholar in Cardiac Surgery.

He is Chairman of the Surgery Curriculum Committee and Director of Surgical Research at WVU Medical School.

Doctor Hill is the author or co-author of some 60 scientific articles.

Registration

The conference registration fee is $75, with checks to be made payable to WVSMA and mailed to WVSMA at P.O Box 4106,

Charleston, WV 25364. There is no fee for residents, medical students and nurses. The fee for non-members is $100.

The Holiday Inn-Gateway is offering a special room rate of $52 (single or double). Specify WVSMA when making reservations to obtain the special rate. Physicians outside the Huntington area who register with WVSMA in advance of the Conference dates will receive a room reservation form for the Holiday Inn-Gateway. When returning the form, be sure to list "WVSMA" on the "group name" line.

For additional information, contact Mary Hamilton at WVSMA, (304) 925-0342 or 1-800-257-4747.

Dustin Hoffman Coming to State

The Cabell County Medical Auxiliary is the sponsor of the first benefit screening, December 11, of the movie "Rain Man," co-starring Dustin Hoffman and Tom Cruise.

"Rain Man" is about an autistic adult played by actor Hoffman, who will appear in person in Huntington prior to the 4:30 P.M. screening at the Keith Albee Theatre.

Tickets are $65 per person for the movie and a champagne dinner with Dustin Hoffman, the producer and director of "Rain Man" and their wives at the Radisson Hotel following the screening.

Tickets for $15 to see the screening only also are available.

Hoffman and the producer and director will speak at both events. In the movie, Hoffman's character unknowingly teaches some of life's more basic lessons to his brother, played by Cruise.

Proceeds will go to the Autism Services Center of Huntington.

The film will be shown in Huntington on the day before its premiere opening in New York City. The nationwide opening will be December 16.

Please make checks payable to Rain Man Benefits and mail to P. O. Box 751, Huntington, WV 25712. You must include a self-addressed envelope to receive tickets by return mail.

For ticket information, contact Cabell County Auxiliary President Ann Hunt, at 1-529-3969, or auxilians Maxine Baur, 1-736-5557, and Ruth Sullivan, 1-525-8014 (office) or 1-523-8269 (home). Ticket information also is available at the Autism Services Center from 9 A.M. to 5 P.M. each work day at 1-525-8014.

Specialized care—WVU School of Medicine's newly opened "65-Plus" Clinic provides specialty health care to geriatric patients. Dolly Hyre of Morgantown (center) receives care from Drs. Mona Counts and David Z. Morgan. (See story on Page 530).

New WVU Class: 87 Students, 8 States

Despite a national trend of declining enrollment, West Virginia University's School of Medicine has 87 first-year students this fall—one of the largest classes in the school's history.

Seventy-one students are from West Virginia, with the remaining enrollees coming from Ohio, Pennsylvania, Maryland, Massachusetts, Montana, Utah and California.

Approximately half of the state's 55 counties are represented in the class of 58 males and 29 females.

Twenty-seven attended WVU as undergraduates. Other state schools with alumni in the class include University of Charleston, West Virginia State College, Marshall University, Alderson Broaddus College, Wheeling College, West Virginia Wesleyan College, Bethany College, Salem College and Davis and Elkins College.

Members of the class, their county or state, hometown, and the schools they attended include:

Barbour: Philippi—Joseph K. Dickenson, Alderson Broaddus College; Belington—Kevin R. Holbert, WVU;

Berkeley: Martinsburg—Bruce P. Gipe, Columbia Union College; Manual C. Vallejo, University of Pittsburgh;

Boone: Madison—Leigh Anne Miller, WVU;

Brooke: Bethany—Curtis L. Neel, Bethany College;

Cabell: Barboursville—Brian K. Childers, MU; Huntington—Joseph H. Duncan, WVU; Thomas J. Fix, Purdue University; and James B. Chafin, Wake Forest University;

Fayette: Mount Carbon—James C. Young, MU;

Grant: Lahmansville—Christina Leigh Goldizen, WVU;

Hancock: Weirton—Amandeep S. Purewal, Washington and Jefferson College;

Harrison: Bridgeport—James D. Bailey, Jr., WVU; Barrett R. Weiss, Washington and Jefferson College; Clarksburg—Stephenie K. Kennedy, Wheeling College; Gerardo Lopez, WVU; Shinnston—Frank M. Abraham, WVU;

(Continued on page 535)

Heroic Acts in Korea in Early Career of Pathologist, WVSMA Officer

Editor's Note: The following was received from Davis Memorial Hospital, Elkins.

More than 100 passengers died when the train they were in derailed at Osan, Korea, on January 31, 1954.

Minutes later, a young U.S. Air Force flight surgeon arrived at the scene.

It was dark and raining that night.

The doctor treated the injured inside shattered wooden railroad cars. He crawled under cars looking for survivors.

It was dangerous work.

The physician had to amputate a man's leg, and dig out a passenger who was buried under train tracks. Men with crow bars pried back the slippery railroad ties that the doctor dug under.

"The crew warned me that I'd lose my hands if those crow bars would slip while I was digging. They were good men and didn't slip," the physician said.

Because of the rescue operation the Air Force officer directed, many passengers were saved.

The flight surgeon was awarded the Soldier's Medal for heroism.

That physician was Capt. Michael M. Stump, M.D.

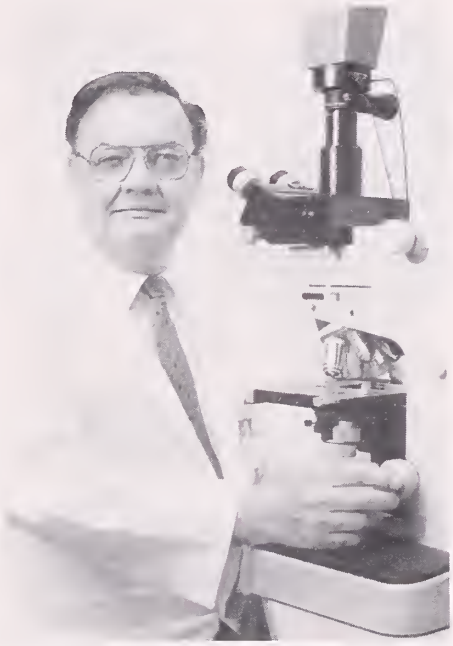
Doctor Stump is now the pathologist and Laboratory Director at Davis Memorial Hospital in Elkins.

Few who work with him know about his heroic acts in Korea, or the many honors that have been bestowed on him throughout his long medical career. Doctor Stump likes it that way. He is a soft-spoken person who doesn't seem to enjoy talking about himself.

Doctor Stump was recently elected Vice President of the West Virginia State Medical Association.

He received his medical degree at the University of Arkansas School of Medicine, completed his internship at Ohio Valley General Hospital, and his pathology residency at Baylor University Hospitals in Houston, Texas.

Doctor Stump is a Diplomate of the Amercian Board of Pathology and the American Board of Quality Assurance and Utilization Review Physicians.



Michael M. Stump, M.D., Elkins, WVSMA Vice President

The former President of the West Virginia Association of Pathologists was the State Medical Association's representative on the Governor's Task Force on AIDS. (He was commended in a resolution adopted during the WVSMA Annual Meeting in August for his "time-consuming labor" in helping to compile an "acceptable" AIDS bill which was approved by the 1988 state Legislature.—Ed.)

Doctor Stump was a general practitioner in Philippi and Ceredo, and a pathologist at hospitals in Tennessee and Texas.

He became the lab director and pathologist at Memorial General Hospital in Elkins in 1976, and was hired by Davis Memorial in 1986.

Many of his articles have been published in medical journals.

"We're very pleased to have a physician with his credentials at Davis Memorial," hospital Chief Executive Officer Robert L. Hammer II said.

"We congratulate him on his election as Vice President of the West Virginia State Medical Association. It's good to see that his peers in the medical profession hold him in the same high esteem that we do."

Poetry Corner

Deep Black

this part's about coal
stuff makes us great
here right? Used to be
trees they say anyway
dead now

this part's about eyes
this guy's eyes when
he answered my question
how's it going and he said
fine and I knew it was a lie
he had to tell to himself and
his parents and I believed him

Charles R. Joy, M.D.
Erie, Pennsylvania

The Last Season

She was so withered some would say
she might blow away;

So old and bent she seemed to have spent
her last breath as she struggled
to the top of the hill.

And still
as she raised her head to face
the wind that swept that knoll,

We knew fair well that she was a part
of that crest
as the old apple tree
the fence
the red sumac leaves.

And when she had had her fill of the
beauty of the autumn sky,
She would return to the fire
the chair
and the house of her old age

And wait to become a part of winter.

Robert L. Smith, M.D.
Morgantown

We request physician contributions to Poetry Corner. Submissions should be addressed to Stephen D. Ward, M.D., Editor, The West Virginia Medical Journal, Box 4106, Charleston 25364.

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Continuing Medical Education; Patricia Penn, WVU Assistant to the Dean/ Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

West Virginia University, Morgantown

Nov. 4-6, Hypnosis Workshop
Nov. 19, Emergency Medicine*
*In conjunction with WVU football game

CAMC/West Virginia University, Charleston Division

Nov. 5, Sleep Disorders
Nov. 12, Trauma Seminar
Nov. 28, Oncology Guest Lecture: Treatment of Small Cell & Testicular Cancer
Dec. 2, Transplant Update: Diabetes in Transplantation
Dec. 12, Oncology Guest Lecture: Rectal Carcinoma, Management

CME Outreach Programs

Key to Sponsors
★ WVU Medical Center, Morgantown
☐ WVU Medical Center-Charleston Division/CAMC
• CAMC/WVU-Charleston Division
(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Nov. 30, Color Flow Doppler, G. G. Thakker, M.D.

Brownsville, PA, ★ General Hospital, 11 A.M.—Nov. 3, Coma in the Diabetic Patient, Timothy Jackson, M.D.
Dec. 1, Transient Ischemic Attacks—Medical vs. Surgical Treatment, John F. Brick, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Nov. 10, Rheumatology Review, Alfred Pfister, M.D.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Nov. (no program)

Fairmont, ★ General Hospital, 8:15 P.M.—Nov. 1, Antibiotic Update, Melanie A. Fisher, M.D.

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Nov. 2, Urgent Pediatric Topics-Including Meningitis, Vera Hoylman, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Nov. (no program)

Logan, • General Hospital, 11:30 A.M.—Nov. 1, Trauma Update, James Kessel, M.D., and Teresa Wagenknecht, R.N.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Nov. 8, Diabetes Mellitus, Stephen R. Grubb, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Nov. 22, Trauma Update, James Kessel, M.D., & Teresa Wagenknecht, R.N.

Montgomery, • General Hospital, 12 P.M.—Nov. 2, Common Childhood Illnesses, Arthur Rubin, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Nov. 10, Circumcision, William Tarry, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Nov. 10, Update Surgical Procedures, John Chapman, M.D.

Parkersburg, ★ Camden-Clark Hospital—Nov. 9, Smoke Inhalation Injuries, Mario Battigelli, M.D.

Ripley, • Jackson General Hospital, 12:30 P.M.—Nov. 4, Management of Elderly Diabetes, Shawn Chillag, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Nov. 17, Fetal Maternal Medicine, Howard Gordon, M.D.

Spencer, • Roane General Hospital, 12:30 P.M.—Nov. 22, Oncology Update: The Lung, Arvind Shah, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Nov. 1, Special Dermatological Problems in the Elderly, Donald Farmer, M.D.

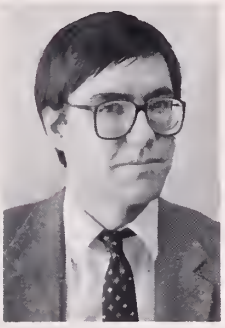
Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Nov. 8, Inflammatory Bowel Disease, Donald G. Seibert, M.D.
Nov. 22, Thyroid Disease & Thyroid Function Tests, Timothy Jackson, M.D.

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Nov. (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Nov. 15, Clinical Assessment of Lung Function, Leroy Lapp, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Nov. 3, Hepatitis Update, Warren Point, M.D.

AAFP CME, Sports Medicine Speakers



Wright

Hogshead

Brown

Eavey

Above are four of some 16 speakers who will be on the faculty of the second annual West Virginia Chapter, American Academy of Family Physicians Weekend and Sports Medicine Conference. The meeting will be held December 2-4 in Huntington at the Radisson Hotel. From left, are Kenneth C. Wright, M.D., Charleston, Clinical Associate Professor, Department of Orthopedic Surgery, West Virginia University Medical School; Nancy Hogshead, olympic gold medalist—swimming, Jacksonville, Florida; Richard B. Brown, M.D., Chief, Infectious Disease Service, Baystate Medical Center, Springfield, Massachusetts, and Roland Eavey M.D., Assistant Professor of Otolaryngology, Harvard Medical School. (See also October Journal.)

New AIDS Hotline In Charleston

An AIDS Hotline service began operaton in Charleston October 1, it was announced by the Charleston AIDS Network.

The organization's President, Terrie Lee, R.N., said the Hotline will be staffed by community volunteers who have been trained to answer questions about AIDS and to serve as a referral source for people needing assistance.

The Hotline will be staffed from 6-8 P.M., seven days a week. An answering machine will be in operation during the remaining hours, and calls will be returned daily, she said.

The number for the Hotline is 345-4673.

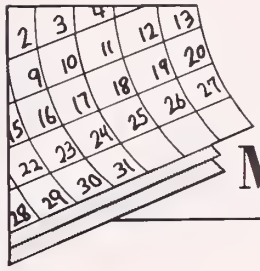
The Charleston AIDS Network is an organization of volunteers, healthcare professionals, social service workers, and community leaders who have established the non-profit independent organization.

Rizal V. Pangilinan, a cataract and implant surgeon at The Wheeling Clinic, is the first West Virginian to assume the presidency of Serra International, Catholic organization. He was installed last summer at the Serra convention in Sydney Australia. Serra International includes over 500 Serra Clubs with over 16,200 members in 29 countries.

Correction

The resignation of Echols A. Hansbarger, Jr., M.D., of Charleston, from the WVSMA Council was not because of ill health, as stated in the story on Page 463 of the October *Journal*.

The *Journal* regrets this error.



Medical Meetings

November

6-9—Southern Medical Assoc., New Orleans.

11—Recognition & Treatment of Anxiety Disorders & Panic Disorders (Highland Hospital/CAMC), Charleston.

12—Laser Surgery Seminar V, Charleston.

18-19—WVSMA Issues '89 Legislative/ Leadership Conference, Charleston.

December

2-3—Advances & Controversies in the Treatment of Health Professionals (Medical Society of Va. Physicians' Health & Effectiveness Program), Williamsburg, Va.

2-4—WV Chapter AAFP Weekend & Sports Medicine Conference.

4-7—AMA Interim Meeting, Dallas.

1989

January

24-27—Southeastern Surgical Conference, Tarpon Springs, Fla.

27-29—22nd Mid-Winter Clinical Conference, Huntington.

February

5—Am. College of Medical Imaging, Los Angeles.

9-14—Am. Academy of Orthopaedic Surgeons, Las Vegas.

24—Am. Academy of Allergy & Immunology, San Antoino, Tex.

March

19-23—Am. College of Cardiology, Anaheim, Calif.

19-24—Am. Assoc. of Immunologists, New Orleans.

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.

13-16—Am. College of Physicians, San Francisco.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

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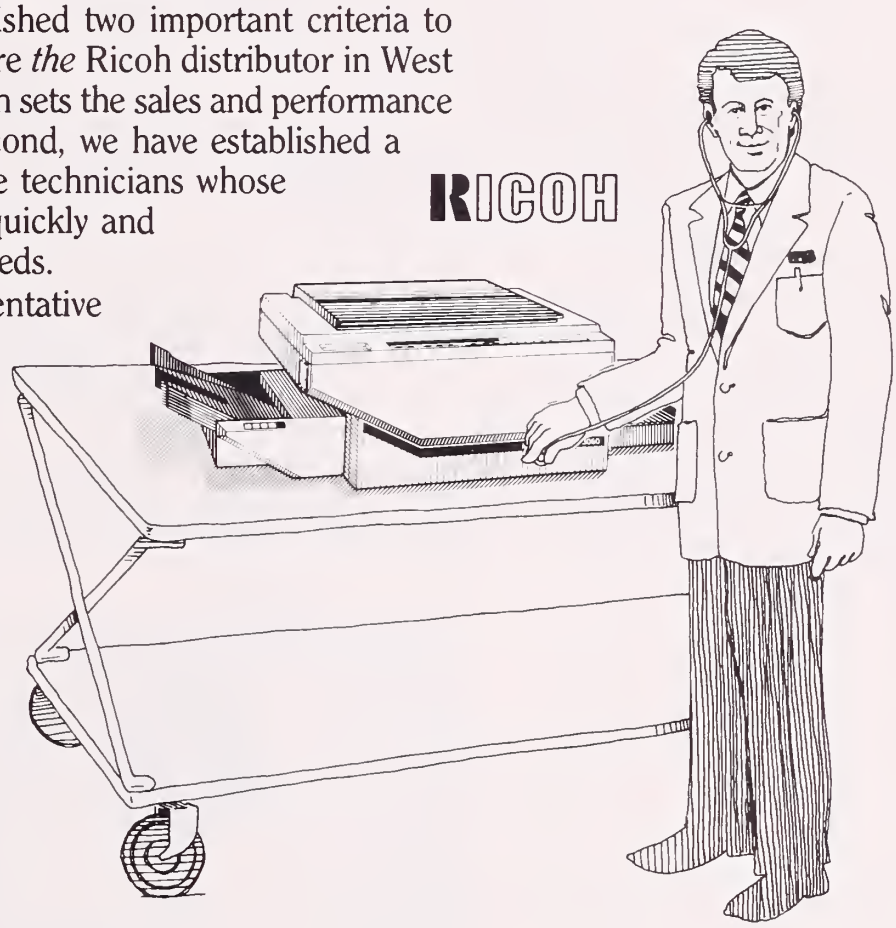

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

'65-Plus Clinic' To Serve Elderly

(See also photo on page 526.)

Health care needs of West Virginia's older people will be met in a newly opened "65-Plus Clinic" in Morgantown.

The clinic is part of a new comprehensive geriatric program, sponsored by WVU School of Medicine and University Health Associates (UHA), which will include patient care, teaching and research.

Robert Colligan, President and Chief Executive Officer of UHA, commented, "With West Virginia's ever-growing elderly population, we saw a need to provide specialized services to area residents who face age-related health care problems. The 65-Plus Clinic does that."

In addition to general physical health care, doctors and resident doctors at the clinic will provide comprehensive individual assessments of acute or chronic health problems.

"What we're offering is a comprehensive evaluation and care program for older citizens which will include a functional and physical assessment of their abilities," said Dr. David Z. Morgan, clinic Director and WVSMA President in 1985-86.

According to Doctor Morgan, the clinic's individual assessments focus on the patient's needs and daily activities such as shopping, using a telephone or taking medication. The assessments also will provide a psycho-social evaluation of the mental status, living environment and interpersonal relationships of the patients.

"Alzheimer's disease may be reaching epidemic proportions, but it's not the only thing that can cause an altered mental state," Doctor Morgan explained.

"We'll also be dealing with the impact such mental problems have on the family and offering help through counseling."

One aspect of research in the geriatric program will focus on gait retraining and working with physical therapists to prevent falls—a leading cause of injury in the elderly.

Doctor Morgan said a course in humanistic medicine also may evolve, focusing on the two main concerns of the elderly: fear of becoming ill and the fear of losing independence.

Counseling also will be available for the wide range of special psychological problems the elderly may develop as they confront their own mortality.

Doctor Morgan added that WVU's aim in sponsoring the clinic is not to replace any current health care facility. "Our aim is not to replace those but to supplement them."

The clinic, located at 3280 University Avenue, will be open from 9:30 A.M. to 5 P.M. on Fridays. Appointments may be made by calling UHA Colonial Park Physicians' office at (304) 599-5403.

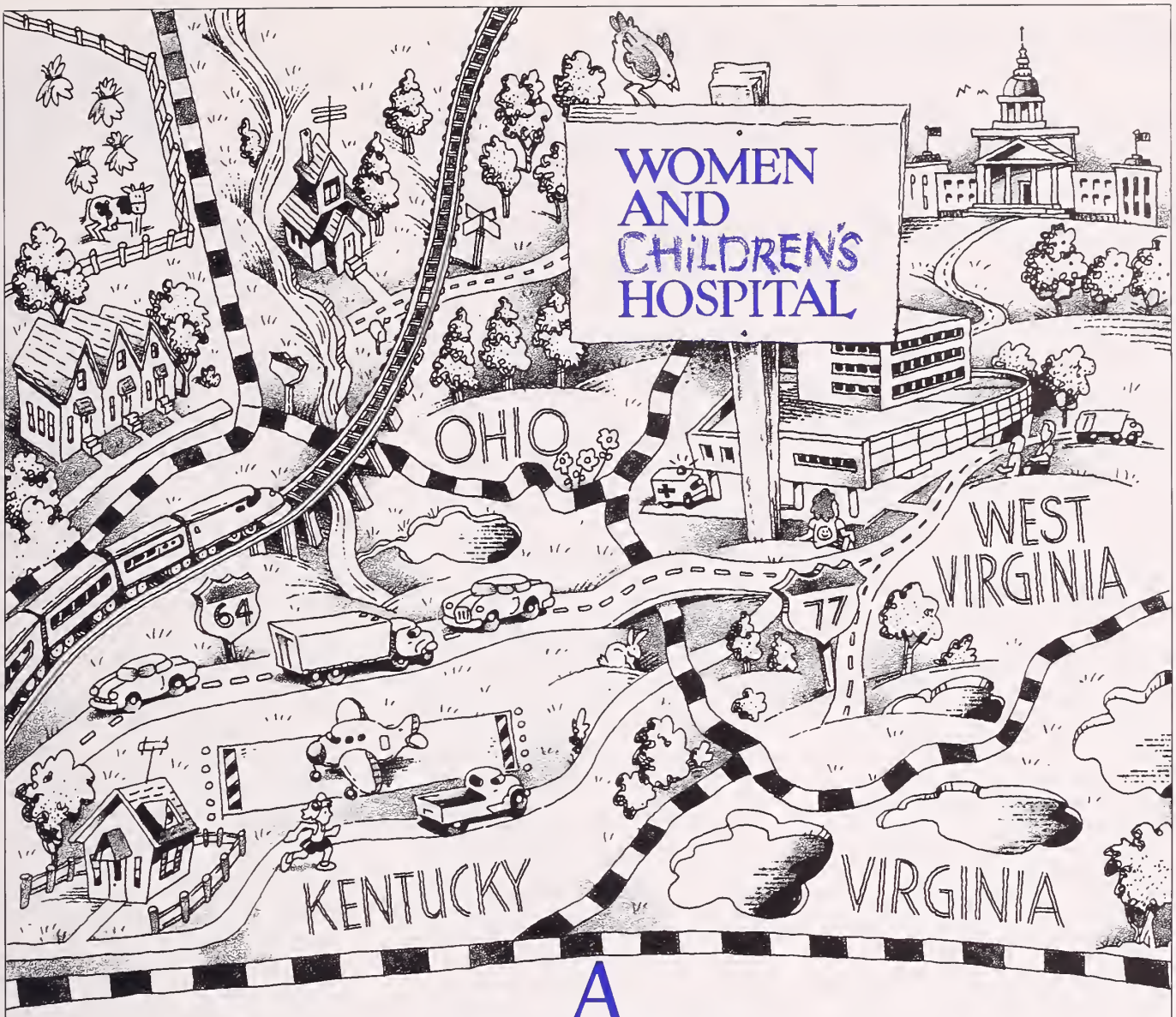
Diagnostic Center For Children

The Children's Diagnostic Center at WVU School of Medicine is identifying hard-to-diagnose illnesses in our children. Under the direction of Assistant Professor Norman Ferrari, M.D., Chief of General Pediatrics and Adolescent Medicine, the Center has been diagnosing problems from subacute thyroiditis to complex failure to thrive.

"Since it isn't always apparent which pediatric subspecialty should deal with a suspected problem, and since many referring physicians may not know the name of each subspecialist on our staff, the Center assists area physicians in providing a focal point for referrals," said Doctor Ferrari. "A lot of referring physicians don't know necessarily all the resources available. We add new subspecialists and new faculty, and it takes a while for that information to be disseminated."

The Center, which is in the general pediatrics clinic area in the Health Sciences Building, may be reached through the Medical Access and Referral System (MARS).

Norman Ferrari, M.D., left, Director, Children's Diagnostic Center, and John Lobban, M.D., first-year medicine/pediatrics resident.



A HEALTHY NEW SIGN IN WEST VIRGINIA

The road to recovery runs both ways. Proof of that is the new Women and Children's Hospital of West Virginia. A healthy new sign for us all.

Women and Children's is a specialized facility of Charleston Area Medical Center devoted exclusively to the physical and emotional needs of women and children. And a new referral source for you, the doctors who care for them. A source for tertiary and specialized care for women and children, the 120-bed hospital offers many types of care found nowhere else in West Virginia.

State-of-the-art technology combines with specialists and sub-specialists in fields such as:

• Infertility • Perinatology • Neonatology • Pediatric cardiology, hematology, oncology, nephrology

We value your referrals for consultation or tertiary services. And we invite you to take a tour of our hospital. To arrange a tour, or for more information, call our administrator, Shirley Perry at (304) 347-9233.

WOMEN
AND
CHILDREN'S
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Division of Charleston Area Medical Center

MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

Dr. Walker On Panel To Advise Congress

Robert B. Walker, M.D., of MU School of Medicine is one of 20 rural health care experts nationwide selected to serve on an advisory panel for a congressional study on rural health.

Doctor Walker's advisory panel will help guide a study by the Office of Technology Assessment, a joint congressional agency which analyzes public policy issues related to science and technology. The OTA's Technology Assessment Board, led by Rep. Morris K. Udall, will assess rural health care, examine ways through which new medical technologies can be provided in rural areas, and identify policies to improve rural health care's quality, affordability and accessibility.

"When it set up this study, the Office of Technology Assessment expressed concern about the large numbers of rural hospitals that have been forced to close, the problems associated with recruiting and keeping health-care providers, and the difficulty in providing rural people with the new medical technologies that are so readily available to folks who live in rural areas," said Doctor Walker, who is Chairman of Marshall's Department of Family and Community Health.

Panel Function

"In a nutshell, the OTA and our advisory panel will be trying to develop ways to make rural health care better," he said.

The advisory panel will help define the study, critique it as it is being prepared, and review the final report before it is released. The first advisory panel meeting was October 28 in Washington, D.C.; the report is expected to be completed in December, 1989.

Doctor Walker said he's pleased that West Virginia has a direct voice in the report's preparation.

"The Marshall School of Medicine has been recognized in the past for its contributions to rural health care, and even received a national award for them, bit this is just as important," he said. "Now people are turning to us to find out what central Appalachia needs in terms of health care, and this gives us significantly greater opportunities to improve health care in our region."

Others serving with Doctor Walker on the advisory panel include Kevin Fickenscher, President of the National Rural Health Association; Robert Graham, Executive Vice President of the American Academy of Family Physicians; and Jeffrey Merrill, Vice President of the Robert Wood Johnson Foundation,

Doctor Walker became Chairman of the Department of Family and Community Health in 1986, and joined the School of Medicine's faculty in 1979. The Florida native came to West Virginia to serve at the Lincoln Primary Care Center in Hamlin as part of the National Health Service Corps. He received his undergraduate and M.D. degrees from the University of Florida and did his residency at the Bowman Gray College of Medicine at Wake Forest University.

He is a member of Phi Beta Kappa and received his undergraduate degree with high honors and special honors in zoology. He received a Special Commendation Award for Rural Medical Service.

Faster Test Found For Diarrhea Cause

An MU School of Medicine doctor has helped discover a cheaper, much faster way to identify the cause of an often-serious form of diarrhea.

Elio Madan, M.D., a pathologist at Marshall, said the test helps doctors quickly identify bacteria known as Clostridium difficile.

"The currently used test for this bacteria takes at least 72 hours to do because it requires culturing bacteria from a stool sample," Doctor Madan said. "This is a difficult and expensive procedure that often has to be done by out-of-town specialized laboratories.

"The new procedure, which tests the sample directly, uses equipment found in many medium-sized hospitals and provides results within one hour," he said. "Although I would encourage doctors to go ahead and have the 72-hour test done as confirmation, the one-hour test can let them know they're on the right track and allow them to start proper therapy immediately."

In recommending the 72-hour test as a back-up, Doctor Madan said that the one-hour test might sometimes miss the bacteria in the very early stages of the illness or if the sample is mishandled.

While the 72-hour test looks for the toxin produced by the bacteria, the new test looks for the bacteria itself through a "fingerprint" it leaves behind: a byproduct called caproic acid.

Doctor Madan and a colleague, Malcolm Slifkin, Ph.D., of Pittsburgh, used both tests on 76 stool samples from people with diarrhea, then compared the test results. The researchers found that the new procedure correctly identified the presence or absence of the bacteria more than 95 per cent of the time.

Antibiotics-Related

Clostridium difficile bacteria cause a watery, sometimes bloody diarrhea which, in serious cases, can even cause perforation of the bowel. This diarrhea tends to be found in patients who have been on antibiotics for a prolonged time—to prevent infection after surgery, for example, or to treat multiple infections.

Obituaries

NEWMAN H. DYER, M.D.

Dr. Newman H. Dyer, Director of the West Virginia Health Department from 1946 to 1978, died October 7 in a Princeton hospital. He was 94.

A native of Bolair (Webster County), he had lived in Charleston during his many years in office and was a 10-year resident of Princeton at the time of his death.

Doctor Dyer was a former member of the Council of the West Virginia State Medical Association, and was a past Chairman of the WVSMA Committee on Syphilis.

He attended West Virginia Wesleyan College, was graduated from West Virginia University, and received his M.D. degree in 1926 from the University of Maryland.

Doctor Dyer earned a master's degree in public health from the University of Michigan. He was Medical Director and plant physician for Pond Creek Pocahontas Coal Company in Bartley (McDowell County) for 20 years before going to Charleston.

In 1962 he received an honorary degree of Doctor of Public Administration from Marshall University and was named West Virginia's greatest leader in the field of public health.

Doctor Dyer, a former member of the consulting staff of Memorial Division, Charleston Area Medical Center, was an honorary member of the Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Canary Hylton Dyer; two daugters, Mrs. Elva Forman of Harrisonburg, Virginia, and Mrs. Dorothy Grubb of Plains, Ohio, and a son, N. Allen Dyer, M.D., of Princeton.

HUGH S. EDWARDS, M.D.

Word recently was received by the *Journal* of the death of Dr. Hugh S. Edwards, former Superintendent of Pinecrest Hospital in Beckley, on April 18, 1988, in a Beckley hospital. He was 79.

Born in Pendleton, North Carolina, he had been a resident of Beckley since 1942 and Superintendent at Pinecrest from 1949 until his retirement in 1982.

Doctor Edwards was President of the Raleigh County Medical Society in 1951 and Chairman of the Committee on Tuberculosis, West Virginia State Medical Association, in 1967-72. He also was a past President of the West Virginia Thoracic Society.

He was graduated from Wake Forest College, and received his M.D. degree in 1935 from the Medical College of Virginia.

Doctor Edwards was a member of the West Virginia Thoracic Society and American Thoracic Society, and an honorary member of the Raleigh County Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include a son, David C. Edwards of Jefferson City, Missouri; a daughter, Deborah A. Short of Beckley; a sister, Ethel Edwards of Norfolk, Virginia, and a brother, David Edwards of Norfolk.

LAWRENCE H. MILLS, M.D.

Dr. Lawrence H. Mills, retired Clarksburg physician who had been serving as Director of the Harrison/Clarksburg Health Department, died September 11 in a hospital there. He was 82.

Doctor Mills, who was born in Parkersburg, was a former Harrison County coroner and health officer (1938-40.)

He was graduated from West Virginia University, and received his M.D. degree in 1935 from the University of Maryland.

Doctor Mills interned and completed a residency in the nose and throat and surgery at Mercy Hospital in Baltimore.

He was a member of the American College of Surgeons and International College of Surgeons, and an honorary member of the Harrison County Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are the wife, Mrs. Mildred G. Young Mills, and one son, Mark Mills of Nutter Fort.

County Societies

MONONGALIA

Bill M. Atkinson, M.D., President of the West Virginia State Medical Association, was guest speaker for the meeting of the Monongalia County Medical Society September 6 in Morgantown.

The Society approved contributions recommended by Council for support of the Auxiliary, a local public television series on the brain, and for support of a continuing page on stories about doctors in issues of The West Virginia Hillbilly.—Robert L. Murphy, Executive Secretary.

WESTERN

The Western Medical Society met September 13 at Jackson General Hospital in Ripley.

Richard Sibley, M.D., Charleston orthopedic surgeon, gave an update on sports injury and current management techniques in orthopedic injuries.

Erlinda Ambrosio, M.D., Spencer, discussed West Virginia Department of Human Services reimbursement problems—only one physician can be paid per day; thus consultations are not being paid. Doctor Ambrosio was advised to write a letter to the department.

P.E.I.B. late payments were discussed by Ali H. Morad, M.D., Ripley.—Aaron D. Cottle, M.D., Secretary-Treasurer.

STATEMENT REQUIRED BY THE ACT OF OCTOBER 23, 1962; SECTION 4369, TITLE 39, UNITED STATES CODE SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF THE WEST VIRGINIA MEDICAL JOURNAL.

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I certify that the statements made by me above are correct and complete.

(Signed) Custer B. Holliday,
Managing Editor

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

The second page should carry an abstract of no more than 150 words summarizing the manuscript.

Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

Photos must be good-quality unmounted glossy prints usually 5 by 7 in. but no larger than 8 by 10 in. Black and white photos are preferred. Color photos will be printed in black and white. Cost of printing photos in excess of four will be billed to the author.

Each photo (figure) should have a label pasted on its back indicating the name, its number and an indication of its "top." A separate legend should be provided for each photo. Do not write on the back of photos, or scratch or mar them using paper clips. Do not mount them on cardboard. Drawings and charts should be done in solid black on pure white.

Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

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1. Ann Intern Med 1982;96:766-71.

CARAFATE®
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BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE
There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
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Reference:
1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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(Continued from page 524)

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Logan: Logan—Marie M. Vickers, MU;

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Mercer: Bluefield—Patricia Harris, WVU;

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Pleasants: St. Marys—Jamy J. Frye, Marietta College; Jill A. Stewart, Harding University;

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Randolph: Elkins—Dilip N. Chandran, SUNY at Binghamton; James W. Gainer, West Virginia Wesleyan College; Shyama M. Masilamani, Hollins College;

Taylor: Buckhannon—Nora Lynn Louk, West Virginia Wesleyan College; Grafton—Joy L. Steadman, Yale University;

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Wood: Parkersburg—Kimberly K. Ott, Ohio University; Sean M. Sabo, Marietta College; Peter W. Strobl, University of Michigan—Ann Arbor, and Philip H. Strobl, WVU; Washington—Terry C. Shank, Salem College;

Out-Of-State

California, Berkeley—Janet V. Widerspan, University of California;

Maryland, Mt. Rainier—Eileen C. Turbessi, Catholic University of America; Parkville—Michael Taylor, Towson State University;

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Utah, Cedar City—Karl K. Trimble, Southern Utah State College; Salt Lake City—Kristina Maciunas, WVU.

New Members

The following physicians and students were welcomed in September as new members of the West Virginia State Medical Association:

Monongalia

David A. Felton, M.D., WVU Medical Center, Department of Surgery, Morgantown 26506

Gregory A. Doyle, M.D., WVU Medical Center, Department of Family Practice, Morgantown 26506

Jose L. Cruzzavala, M.D., WVU Medical Center, Department of Medicine, Morgantown 26506

Julio Hochberg, M.D., WVU Medical Center, Department of Surgery, Morgantown 26506

Dale R. Meyer, M.D., WVU Medical Center, Department of Ophthalmology, Morgantown 26506

Marijo A. Zelinka, M.D., WVU Medical Center, Department of Pediatrics, Morgantown 26506

Harold G. Ashcraft, M.D., WVU Medical Center, Department of Pathology, Morgantown 26506

William B. Kerns, M.D., WVU Medical Center, Department of Pediatrics, Morgantown 26506

Leonardo M. Antaris, M.D., WVU Medical Center, Department of Ophthalmology, Morgantown 26506

Kevin A. Halbritter, M.D., WVU Medical Center, Department of Medicine, Morgantown 26506

Steven A. McCormick, M.D., WVU Medical Center, Department of Pathology, Morgantown 26506

Ronald Deandrade, Jr., M.D., WVU Medical Center, Department of Medicine, Morgantown 26506

Daniel E. Banks, M.D., WVU Medical Center, Department of Medicine, Morgantown 26506

Miklos L. Auber, M.D., WVU Medical Center, Department of Medicine, Morgantown 26506

Richard H. Docherty, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506

Robert E. Heflin II, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506

Andrzej J. Jaworski, M.D., 161 Ontario Avenue, Morgantown 26505

Kurt M. Nellhause, M.D., 99 J. D. Anderson Drive, Morgantown 26505

Summers

Michael E. Kilkenny, M.D., 121 Ballangee Street, Drawer 1060, Hinton 25951

Resident

William T. Corder, M.D., 4204 Chestnut Hill #1, Morgantown 26505

Students

Michael Parsons, 258 Kingwood, Apartment A, Morgantown 26505

Christian L. Traynelis, 1050 Valley View Avenue, No. 16, Morgantown 26506

Monique Gingold, 452 Hillview Drive, Morgantown 26505

Lauri J. Adler, 2800 Hart Street, Apartment 9, Charleston 25304

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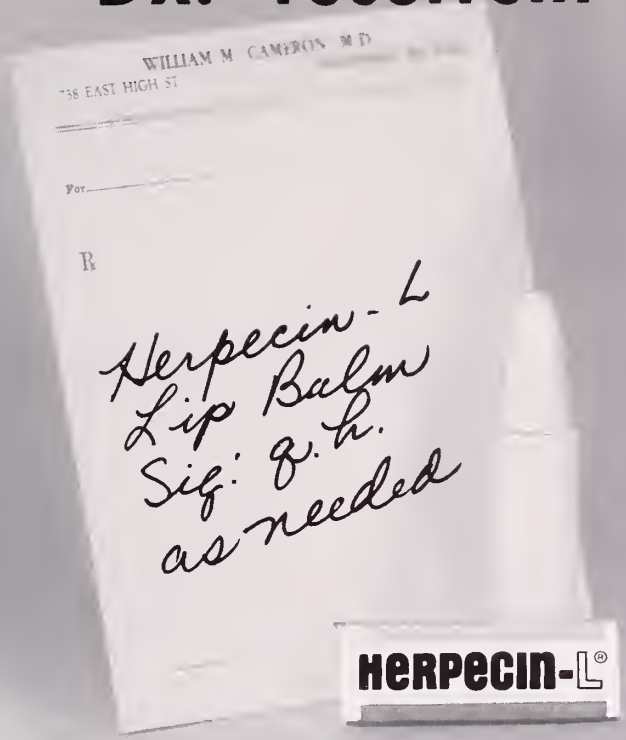

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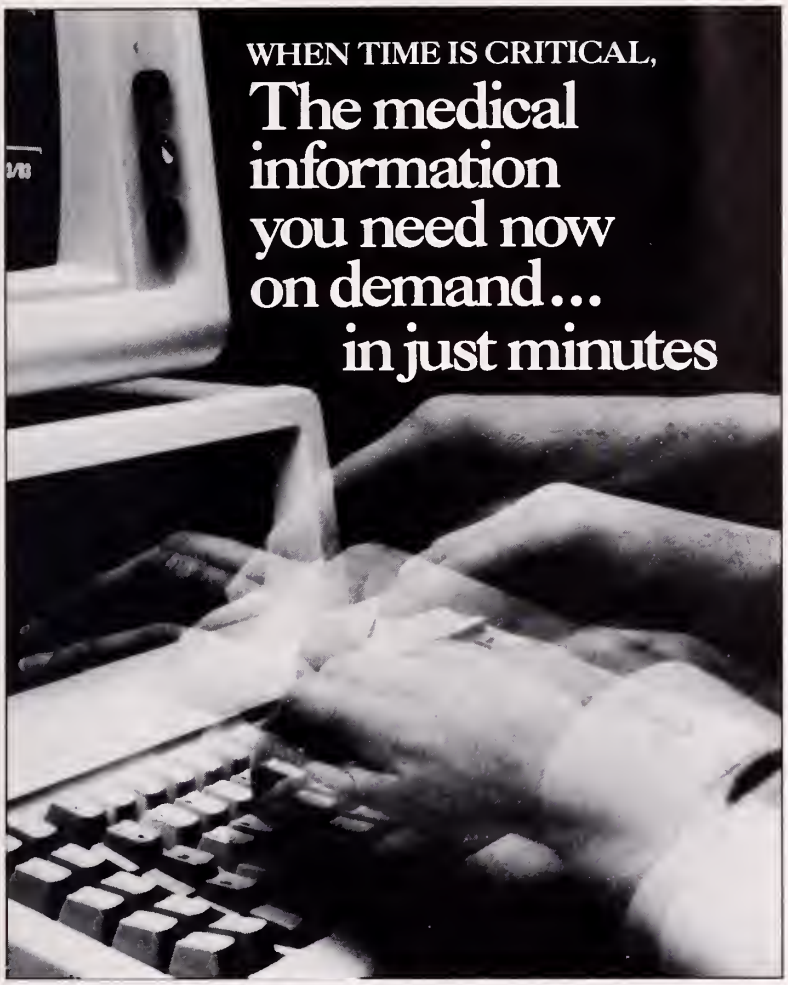

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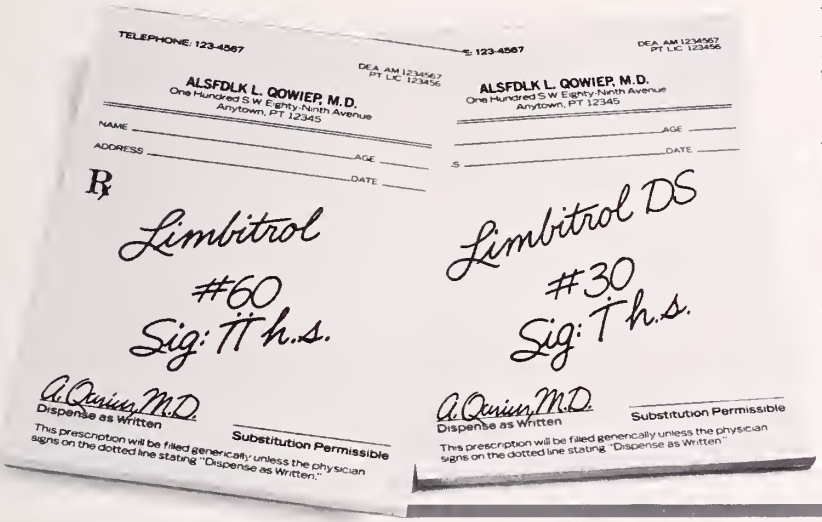

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

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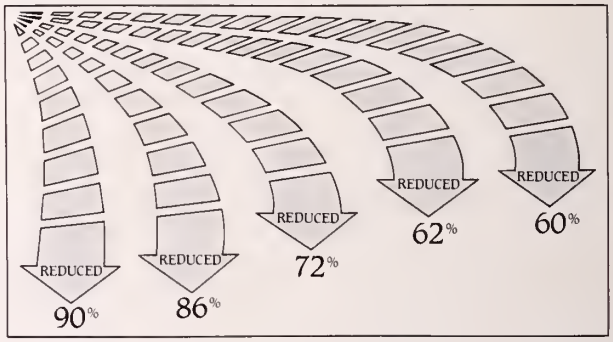
Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

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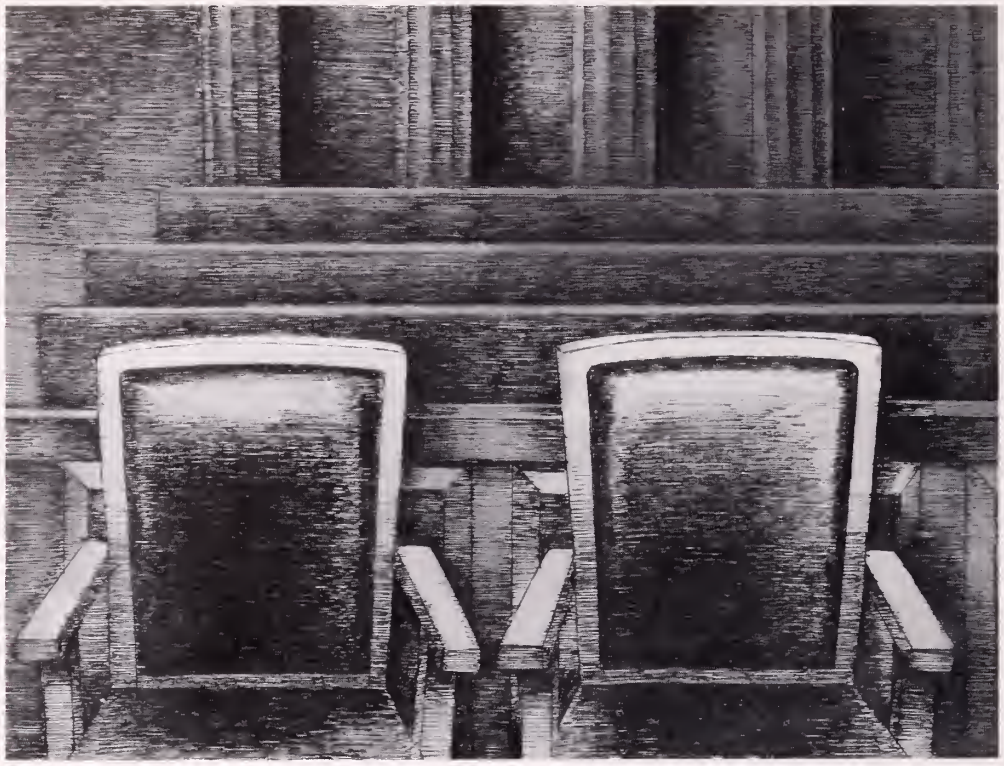

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CONTRAINDICATIONS

A history of hypersensitivity to ciprofloxacin is a contraindication to its use. A history of hypersensitivity to other quinolones may also contraindicate the use of ciprofloxacin.

WARNINGS

CIPROFLOXACIN SHOULD NOT BE USED IN CHILDREN, ADOLESCENTS, OR PREGNANT WOMEN. The oral administration of ciprofloxacin caused lameness in immature dogs. Histopathological examination of the weight-bearing joints of these dogs revealed permanent lesions of the cartilage. Related drugs such as nalidixic acid, cinoxacin, and norfloxacin also produced erosions of cartilage of weight-bearing joints and other signs of arthropathy in immature animals of various species (SEE ANIMAL PHARMACOLOGY SECTION IN FULL PRESCRIBING INFORMATION).

PRECAUTIONS

General: As with other quinolones, ciprofloxacin may cause central nervous system (CNS) stimulation, which may lead to tremor, restlessness, lightheadedness, confusion, and very rarely to hallucinations or convulsive seizures. Therefore, ciprofloxacin should be used with caution in patients with known or suspected CNS disorders, such as severe cerebral arteriosclerosis or epilepsy, or other factors which predispose to seizures (SEE ADVERSE REACTIONS).

Quinolones may also cause anaphylactic reactions and cardiovascular collapse. Anaphylactic reactions may require epinephrine and other emergency measures.

Crystals of ciprofloxacin have been observed rarely in the urine of human subjects but more frequently in the urine of laboratory animals. Crystalluria related to ciprofloxacin has been reported only rarely in man, because human urine is usually acidic. Patients receiving ciprofloxacin should be well hydrated, and alkalinity of the urine should be avoided. The recommended daily dose should not be exceeded. Alteration of the dosage regimen is necessary for patients with impairment of renal function (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

Drug Interactions: Concurrent administration of ciprofloxacin with theophylline may lead to elevated plasma concentrations of theophylline and prolongation of its elimination half-life. This may result in increased risk of theophylline-related adverse reactions. If concomitant use cannot be avoided, plasma levels of theophylline should be monitored and dosage adjustments made as appropriate.

Antacids containing magnesium hydroxide or aluminum hydroxide may interfere with the absorption of ciprofloxacin, resulting in serum and urine levels lower than desired, concurrent administration of these agents with ciprofloxacin should be avoided.

Probenecid interferes with the renal tubular secretion of ciprofloxacin and produces an increase in the level of ciprofloxacin in the serum. This should be considered if patients are receiving both drugs concomitantly.

As with other broad-spectrum antibiotics, prolonged use of ciprofloxacin may result in overgrowth of nonsusceptible organisms. Repeated evaluation of the patient's condition and microbial susceptibility testing is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Information for Patients: Patients should be advised that ciprofloxacin may be taken with or without meals. The preferred time of dosing is two hours after a meal. Patients should also be advised to drink fluids liberally and not take antacids containing magnesium or aluminum concomitantly or within two hours after dosing. Ciprofloxacin may cause dizziness or lightheadedness; therefore patients should know how they react to this drug before they operate an automobile or machinery or engage in activities requiring mental alertness or coordination.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Eight *in vitro* mutagenicity tests have been conducted with ciprofloxacin and the test results are listed below:

- Salmonella/Microsome Test (Negative)
- *E. coli* DNA Repair Assay (Negative)
- Mouse Lymphoma Cell Forward Mutation Assay (Positive)
- Chinese Hamster V_{79} Cell HGPRT Test (Negative)
- Syrian Hamster Embryo Cell Transformation Assay (Negative)
- *Saccharomyces cerevisiae* Point Mutation Assay (Negative)
- *Saccharomyces cerevisiae* Mitotic Crossover and Gene Conversion Assay (Negative)
- Rat Hepatocyte DNA Repair Assay (Positive)

Thus, two of the eight tests were positive, but the following three *in vivo* test systems gave negative results:

- Rat Hepatocyte DNA Repair Assay
- Micronucleus Test (Mice)
- Dominant Lethal Test (Mice)

Long-term carcinogenicity studies in animals have not yet been completed.

Pregnancy – Pregnancy Category C: Reproduction studies have been performed in rats and mice at doses up to six times the usual daily human dose and have revealed no evidence of impaired fertility or harm to the fetus due to ciprofloxacin. In rabbits, as with most antimicrobial agents, ciprofloxacin (30 and 100 mg/kg orally) produced gastrointestinal disturbances resulting in maternal weight loss and an increased incidence of abortion. No teratogenicity was observed at either dose. After intravenous administration, at doses up to 20 mg/kg, no maternal toxicity was produced, and no embryotoxicity or teratogenicity was observed. There are, however, no adequate and well-controlled studies in pregnant women. SINCE CIPROFLOXACIN, LIKE OTHER DRUGS IN ITS CLASS, CAUSES ARTHROPATHY IN IMMATURE ANIMALS, IT SHOULD NOT BE USED IN PREGNANT WOMEN (SEE WARNINGS).

Nursing Mothers: It is not known whether ciprofloxacin is excreted in human milk; however, it is known that ciprofloxacin is excreted in the milk of lactating rats and that other drugs of this class are excreted in human milk. Because of this, and because of the potential for serious adverse reactions from ciprofloxacin in nursing infants, a decision should be made to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Ciprofloxacin should not be used in children because it causes arthropathy in immature animals (SEE WARNINGS).

ADVERSE REACTIONS

Ciprofloxacin is generally well tolerated. During clinical investigation, 2,799 patients received 2,868 courses of the drug. Adverse events that were considered likely to be drug related occurred in 7.3% of courses, possibly related in 9.2%, and remotely related in 3.0%. Ciprofloxacin was discontinued because of an adverse event in 3.5% of courses, primarily involving the gastrointestinal system (1.5%), skin (0.6%), and central nervous system (0.4%).

The most frequently reported events, drug related or not, were nausea (5.2%), diarrhea (2.3%), vomiting (2.0%), abdominal pain/discomfort (1.7%), headache (1.2%), restlessness (1.1%), and rash (1.1%).

Additional events that occurred in less than 1% of ciprofloxacin courses are listed below. Those typical of quinolones are italicized.

GASTROINTESTINAL: *(See above),* painful oral mucosa, oral candidiasis, dysphagia, intestinal perforation, gastrointestinal bleeding.

CENTRAL NERVOUS SYSTEM: *(See above), dizziness, lightheadedness, insomnia, nightmares, hallucinations, manic reaction, irritability, tremor, ataxia, convulsive seizures, lethargy, drowsiness, weakness, malaise, anorexia, phobia, depersonalization, depression, paresthesia.*

SKIN/HYPERSENSITIVITY: *(See above), pruritus, urticaria, photosensitivity, flushing, fever, chills, angioedema, edema of the face, neck, lips, conjunctivae or hands,* cutaneous candidiasis, hyperpigmentation, erythema nodosum.

Allergic reactions ranging from urticaria to anaphylactic reactions have been reported.

SPECIAL SENSES: *blurred vision, disturbed vision, (change in color perception, overbrightness of lights), decreased visual acuity, diplopia, eye pain, tinnitus, bad taste.*

MUSCULOSKELETAL: *joint or back pain, joint stiffness,* achiness, neck or chest pain, flare-up of gout.

RENAL/UROGENITAL: *interstitial nephritis, renal failure,* polyuria, urinary retention, urethral bleeding, vaginitis, acidosis.

CARDIOVASCULAR: palpitations, atrial flutter, ventricular ectopy, syncope, hypertension, angina pectoris, myocardial infarction, cardiopulmonary arrest, cerebral thrombosis.

RESPIRATORY: epistaxis, laryngeal or pulmonary edema, hiccough, hemoptysis, dyspnea, bronchospasm, pulmonary embolism.

Most of these events were described as only mild or moderate in severity, abated soon after the drug was discontinued, and required no treatment.

In several instances, nausea, vomiting, tremor, restlessness, agitation, or palpitations were judged by investigators to be related to elevated plasma levels of theophylline possibly as a result of a drug interaction with ciprofloxacin.

Adverse Laboratory Changes: Changes in laboratory parameters listed as adverse events without regard to drug relationship:

Hepatic – Elevations of: ALT (SGPT) (1.9%), AST (SGOT) (1.7%), alkaline phosphatase (0.8%), LDH (0.4%), serum bilirubin (0.3%).

Hematologic – eosinophilia (0.6%), leukopenia (0.4%), decreased blood platelets (0.1%), elevated blood platelets (0.1%), pancytopenia (0.1%).

Renal – Elevations of: Serum creatinine (1.1%), BUN (0.9%).

CRYSTALLURIA, CYLINDRURIA, AND HEMATURIA HAVE BEEN REPORTED.

Other changes occurring in less than 0.1% of courses were: Elevation of serum gammaglutamyl transferase, elevation of serum amylase, reduction in blood glucose, elevated uric acid, decrease in hemoglobin, anemia, bleeding diathesis, increase in blood monocytes, and leukocytosis.

OVERDOSAGE

Information on overdosage in humans is not available. In the event of acute overdosage, the stomach should be emptied by inducing vomiting or by gastric lavage. The patient should be carefully observed and given supportive treatment. Adequate hydration must be maintained. In the event of serious toxic reactions from overdosage, hemodialysis or peritoneal dialysis may aid in the removal of ciprofloxacin from the body, particularly if renal function is compromised.

DOSAGE AND ADMINISTRATION

The usual adult dosage for patients with urinary tract infections is 250 mg every 12 hours. For patients with complicated infections caused by organisms not highly susceptible, 500 mg may be administered every 12 hours.

Respiratory tract infections, skin and skin structure infections, and bone and joint infections may be treated with 500 mg every 12 hours. For more severe or complicated infections, a dosage of 750 mg may be given every 12 hours.

The recommended dosage for infectious diarrhea is 500 mg every 12 hours.

In patients with renal impairment, some modification of dosage is recommended (SEE DOSAGE AND ADMINISTRATION SECTION IN FULL PRESCRIBING INFORMATION).

HOW SUPPLIED

Cipro® (ciprofloxacin HCl/Miles) is available as tablets of 250 mg, 500 mg, and 750 mg in bottles of 50, and in Unit-Dose packages of 100 (SEE FULL PRESCRIBING INFORMATION FOR COMPLETE INFORMATION).

***Due to susceptible strains of indicated pathogens.**
See indicated organisms in Prescribing Information.

CONVENIENT *B.I.D.* DOSAGE

Recommended dosage schedule

Infection Site*	Severity of Infection	Dosage
Respiratory Tract*	Mild/Moderate	500 mg q12h
Bone and Joint*		
Skin/Skin Structure*	Severe/Complicated	750 mg q12h
Urinary Tract*	Mild/Moderate	250 mg q12h
	Severe/Complicated	500 mg q12h
Infectious Diarrhea*	Mild/Moderate/Severe	500 mg q12h

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Soldier being examined for effects of high-altitude cerebral edema.

ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow, Massachusetts General Hospital, Boston, Massachusetts. Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude); Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neurosurgery Research Fellowship Training, National Institutes of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial Fellowship, National Masonic Medical Research Foundation; Albert Schweitzer Fellowship, International Albert Schweitzer Foundation; Harvard Medical School Cabot Prize for Best Senior Thesis; recently published article, "Who Shall Live and Who Shall Die" in Newsweek Magazine.

"The work I'm doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn't ask for a smoother transition. And that's true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

"Some of the projects the Army is undertaking are on the cutting edge of research. For example, I'm currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

"The quality of medicine and the caliber of people I've been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I'm giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General."

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For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.
Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.
Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%, genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis, elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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Opportunity For Prevention

Excess Mortality From Heart Disease In West Virginia

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From 1960 to 1980, the annual death rate from heart disease in West Virginia (WV) rose 11 per cent, from 370 to 409 deaths per 100,000 population. This increase reflected an aging population, however, since the rates decreased for each age group. Adjusted to a standard population, the overall rate decreased 14 per cent as compared to 27 per cent nationwide. By sex and by age, downward trends in WV all lagged behind those for the United States. By 1980, adjusted cardiac mortality for WV was 16 per cent above the national level, 12 per cent higher for the WV elderly, and 30 per cent higher for West Virginians 35 through 64 years of age, when death from heart disease is considered to be "premature." Moreover, excessive premature mortality from heart disease occurred in almost every county.

These findings are consistent with surveys that have demonstrated high prevalence rates in WV for several avoidable coronary risk factors. While lack of access to medical interventions may also be an important factor, the high mortality rate for WV should be addressed through primary interventions targeting lifestyles that increase the risk of developing heart disease.

State Health Department efforts need to promote and support community-based programs that utilize proven health education technologies for bringing about population risk reduction.

Introduction

Following a long-term rise that peaked in the mid-1960s, the incidence of death from heart disease in the United States has undergone a substantial and sustained decline. Despite certain changes in the practice of death certification, it is well established that the trend is real, reflecting both a lower incidence of coronary disease and improved patient survival (1-5). Nevertheless, heart disease remains the leading cause of death is this country, and the affected commonly become symptomatic during the most productive years of life. Following unintentional injuries and cancer, it is the third leading contributor to years of life lost before age 65 (6). Moreover, heart disease is the second leading cause of short-term hospitalization, and creates one of the greatest economic burdens of all diseases (7).

The favorable trend has not been uniform by state or by region, however (8,9). In the Appalachian region, where the decrease has been slower than in others, West Virginia has recorded the highest coronary heart disease mortality rates for white males, white females, and black males, and one of the highest rates for black females. Furthermore, in years of life lost before age 65, heart disease ranks second in West Virginia among all causes (ahead of cancer) (10), as compared to third in the United States.

This paper compares West Virginia and nationwide trends in death from heart disease from 1960 through 1980 and illustrates the relative excess that has occurred in this state over time. The current differential has important implications for statewide health promotion and disease-prevention activities

TABLE 1

Deaths From Heart Disease and Sex-Specific Mortality Rates* by Age, West Virginia, 1959-1961 and 1979-1981

	1959-1961				1979-1981			
		Rate				Rate		
Age (yrs)	*Deaths (%)*	*Total*	*Male*	*Female*	*Deaths (%)***	*Total*	*Male*	*Female*
All	20,651 (100.0)	370.0	456.3	286.5	23,897 (100.0)	408.6	460.5	359.6
0-34	173 (0.8)	5.4	6.3	4.4	146 (0.6)	4.4	5.5	3.2
35-44	584 (2.8)	81.5	130.5	36.7	345 (1.4)	55.4	86.8	24.8
45-54	1,812 (8.8)	285.4	441.5	133.6	1,337 (5.6)	225.0	356.0	107.5
55-64	3,431 (16.6)	711.8	1,034.3	399.9	3,676 (15.4)	619.2	922.4	358.9
65-74	5,756 (27.9)	1,721.5	2,186.5	1,269.3	6,290 (26.3)	1,423.4	2,006.5	973.3
75-84	6,134 (29.7)	3,994.7	4,395.3	3,623.9	6,991 (29.3)	3,274.7	4,164.7	2,723.9
85 +	2,761 (13.4)	9,319.8	9,747.3	8,971.8	5,109 (21.4)	8,774.3	9,818.4	8,250.8

*Deaths per 100,000 population per year
**Includes 3 deaths of unknown age

and for supporting community-based cardiovascular risk-reduction efforts.

Methods

For the purposes of this study, we examined heart disease mortality at five-year intervals from 1960 through 1980. Deaths from heart disease were identified from national and state death records with underlying cause listed as "diseases of the heart" according to codes given by the Seventh, Eighth, and Ninth Revisions of the International Classification of Diseases (ICD). Relevant ICD codes in the Seventh Revision, in use from 1958-1967, were 400-443; in the Eighth Revision, in use from 1968-1978, they were 390-398, 402-404, and 410-429, and in the Ninth Revision, used since 1979, they were 390-398, 402, and 404-429.

To minimize year-to-year fluctuations, mortality in West Virginia was taken as the average annual number of deaths in three-year aggregates centered on each year of interest (e.g., 1959-61 for 1960, 1964-66 for 1965, etc.). Because larger numbers (subject to much less random variation) are compiled nationally, United States mortality was determined from deaths recorded only in the years of interest.

Deaths were grouped by age, according to both sex and race (white/nonwhite). To calculate age/sex/race-specific death rates for 1960, 1970, and 1980, we used population figures obtained directly from United States Census Bureau publications (11-13); for 1965 and 1975, we estimated the population by interpolation. Demographic differences between West Virginia and the United States and population changes over time were accounted for by standardizing summary rates to the 1970 United States population.

West Virginia county-specific mortality for persons 35-64 years of age was also determined by aggregating deaths over five years (1978-1982). A standardized mortality ratio (SMR) was calculated separately for each county by dividing the number of observed heart disease deaths by the number of deaths expected (based on age/sex/race-specific rates for the nation in 1980). A SMR >1.0 indicates a relative mortality excess compared to the nation, and a value <1.0 indicates a relative deficit.

TABLE 2

Mortality Rates* From Heart Disease, West Virginia and United States, 1960 and 1980

	1960			1980			% change 1960-80	
	W.V.	*U.S.*	*SMR***	*W.V.*	*U.S.*	*SMR***	*W.V.*	*U.S.*
Total	400.3	404.9	0.99	345.7	297.1	1.16	-14	-27
Sex								
Male	444.0	455.0	0.98	402.8	346.2	1.16	-9	-24
Female	358.8	357.4	1.00	291.5	250.6	1.16	-19	-34
Age (yrs)								
35-44	87.6	75.6	1.16	58.2	43.8	1.33	-34	-42
45-54	291.8	269.6	1.08	238.5	178.1	1.34	-18	-34
55-64	708.7	733.4	0.97	636.0	495.2	1.28	-10	-32
65-74	1672.3	1714.2	0.98	1421.4	1220.3	1.16	-15	-29
75-84	3924.2	4039.6	0.97	3291.5	3031.9	1.09	-16	-25
85 +	9118.3	9247.6	0.99	8729.2	7836.6	1.11	- 4	-15

*Deaths per 100,000 population per year. Overall rates have been adjusted by race, sex, and age to the 1970 population distribution of the United States.
Sex-specific rates are adjusted by race and age. Age-specific rates are adjusted by race and sex.
**Standardized mortality ratio = the adjusted rate in West Virginia divided by the adjusted rate for the United States.

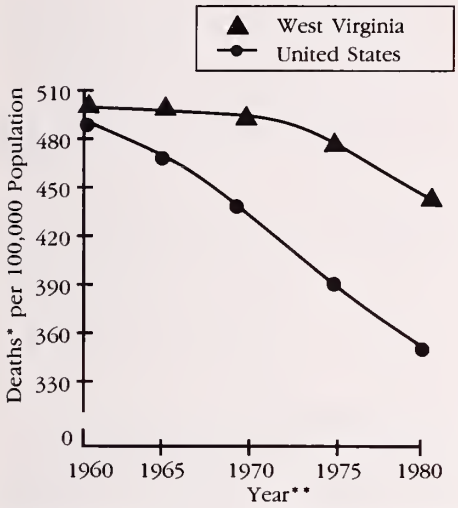
Results

General descriptive characteristics and changes from 1960 to 1980: Diseases of the heart were listed as the underlying cause for 20,651 (38.5 per cent) of the 53,697 West Virginia resident deaths in 1959-61 and for 23,897 (41.9 per cent) of the 57,088 deaths in 1979-81. Mortality rates increased sharply with older age; males had much higher rates than females (Table 1). In both periods, more than 99 per cent of the deaths from heart disease involved persons 35 years of age and older. Persons 35-64 years contributed 28.2 per cent of these deaths in 1959-61 and 22.4 per cent in 1979-81. The per cent decrease reflected a decrease in the size of this population relative to persons 65 and older (the elderly), who accounted for 70.9 per cent of the heart disease deaths in 1959-61 and 77.0 per cent in 1979-81. Although the annual crude rate increased 11 per cent from 370 to 409 deaths per 100,000 (a function of the aging population), all age-specific rates decreased.

Adjusted to the standard population, the overall heart disease mortality rate for West Virginia exhibited a 14-per cent decrease from 1960 to 1980 compared to a 27-per cent decrease nationwide (Table 2). Whereas the rate for West Virginia was similar to that of the United States in 1960, by 1980 it was 16 per cent higher as a result of smaller percentage decreases for both males and females and for all age groups 35 and older. Combining ages 35-64, heart disease death rates decreased by 15 per cent in West Virginia compared to 34 per cent nationwide (not shown). As a result, West Virginia mortality for persons 35-64 years of age increased from two per cent above the national level in 1960 to 30 per cent above in 1980. For the elderly, mortality decreased by 13 per cent in West Virginia as compared to 24 per cent nationwide (combined 65 + strata not shown), increasing the difference in West Virginia from two per cent below the national level in 1960 to 12 per cent above in 1980.

Trends by five-year intervals: Figures 1 through 4 illustrate the relative lack of improvement in West Virginia mortality trends compared to those of the United States. For 35- to 64-year-old West Virginia men, the heart disease mortality rate did not decrease until after 1965. By 1980 it was only slightly lower than the national rate had been in 1970 (Figure 1). For 35- to 64-year-old women, mortality increased until 1970. By 1980 it had decreased to a level that was slightly higher than the national rate had been in 1970 (Figure 2). For elderly men

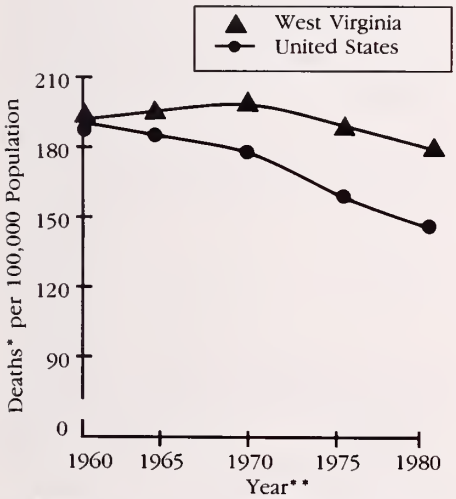
in West Virginia, the mortality rate began to decrease after 1965 (Figure 3), although for elderly women, it had been decreasing since 1960 (Figure 4). By 1980, the rates for elderly males and females were between the respective national levels for 1970 and 1975.



*Adjusted by age and race (white/nonwhite) using 1970 U.S. population as the standard.

**For West Virginia, each rate was based on a 3-year average around the specified year.

Figure 1. Trends in mortality from heart disease for males 35-64 years of age, West Virginia and United States, 1960-1980.



*Adjusted by age and race (white/nonwhite) using 1970 U.S. population as the standard.

**For West Virginia, each rate was based on a 3-year average around the specified year.

Figure 2. Trends in mortality from heart disease for females 35-64 years of age, West Virginia and United States, 1960-1980.

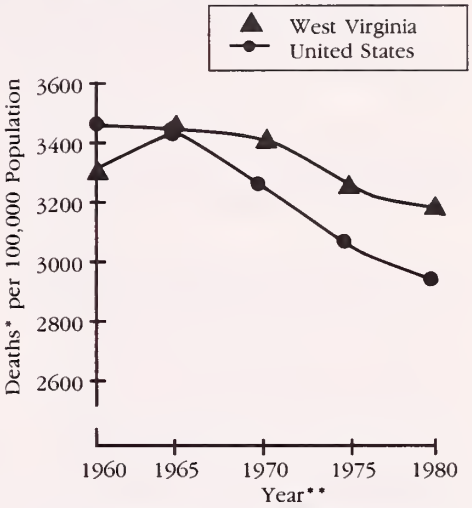
County-specific premature mortality: For persons 35-64 years, Figure 5 shows the distribution of county-specific cardiac mortality ratios for 1978-1982, indirectly standardized to 1980 United States rates. Forty-six (84 per cent) of the 55 counties had premature heart disease mortality that exceeded the national average by 20 per cent or more (SMRs $\geq$1.2). Of the 2,120 excess heart disease deaths among West Virginians 35-64 years over the five-year period (8,932 observed minus 6,812 expected), 2056 (97 per cent) occurred in these 46 counties.

Discussion

The decrease in deaths from heart disease has been a notable event (1-3), and validates the concept that this is a preventable health problem. Although several determinants of heart diseases such as older age, male gender, and genetic predisposition cannot be altered, epidemiologic research in the past 35 years has contributed to our understanding of the importance of additional risk factors that can be controlled through personal choice and behavior change. These include cigarette smoking, high blood pressure, elevated serum cholesterol, obesity, and lack of exercise. Well documented population reductions in blood pressure, cigarette smoking, and serum cholesterol level since the 1960s (14-17), in addition to the highly publicized trends toward increased dietary and exercise consciousness, have coincided with the decrease in heart disease deaths. While such correlations provide indirect support for the notion that primary prevention is a key element in the control of heart disease, clinical trials have provided direct evidence that behavior changes are effective in reducing coronary disease risk (18-21). Therapeutic advances (secondary and tertiary interventions) have also contributed to the downward trend, although somewhat less, by reducing case fatality and increasing overall survival of symptomatic patients (4,5).

Interventions have yet to be applied to their maximum potential, however, and promoting awareness of personal risks and reducing coronary-prone behaviors remain important national objectives (22). Compared with more socioeconomically advantaged groups, the less educated and less affluent have undergone fewer changes in their risk behaviors (3), and also have less access to sophisticated medical care. This is consistent with reports of slower declines in cardiac mortality among disadvantaged groups (3), and may partially explain why the decrease is less dramatic in regions where such groups are heavily concentrated (8).

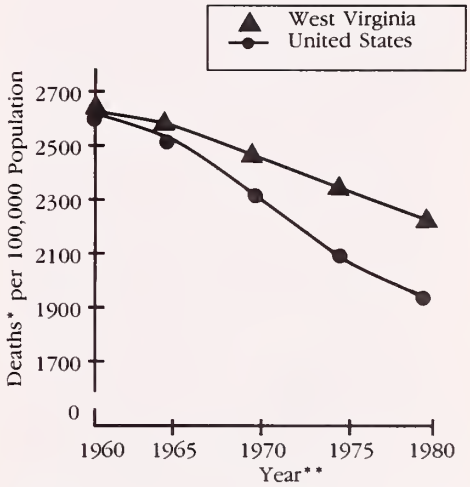
(Continued on Next Page)



*Adjusted by age and race (white/nonwhite) using 1970 U.S. population as the standard.

**For West Virginia, each rate was based on a 3-year average around the specified year.

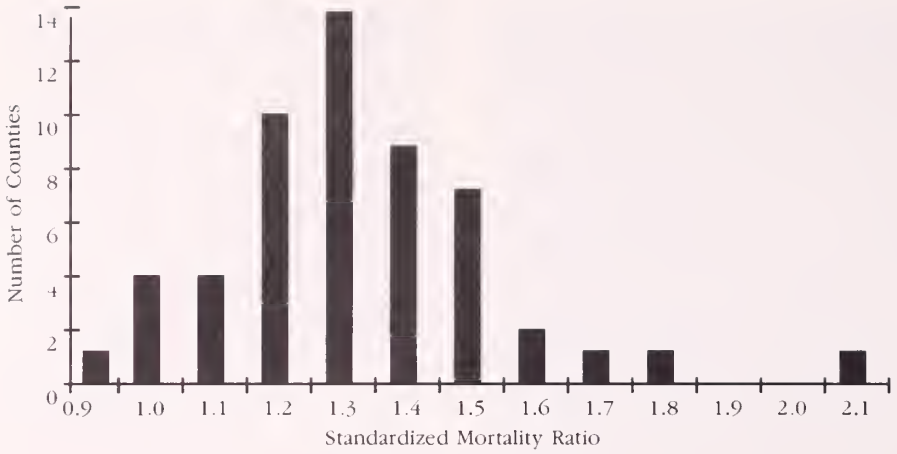
Figure 3. Trends in mortality from heart disease for males 65 years of age and older, West Virginia and United States, 1960-1980.



*Adjusted by age and race (white/nonwhite) using 1970 U.S. population as the standard.

**For West Virginia, each rate was based on a 3-year average around the specified year.

Figure 4. Trends in mortality from heart disease for females 65 years of age and older, West Virginia and United States, 1960-1980.



*Number of deaths observed divided by number of deaths expected (based on 1980 age/sex/race-specific death rates for U.S.)

Figure 5. Distribution of county-specific standardized mortality ratios* for diseases of the heart for persons 35-64 years of age, West Virginia, 1978-1982.

The key finding of this study is that, despite comparable rates with the United States at the peak of the "epidemic" and the subsequent decrease, there has been a relative worsening of West Virginia's cardiac mortality among both men and women and for all age groups since the early 1960s. The severity and extent of the current problem in West Virginia is underscored by the observation that premature death (before age 65) from heart disease exceeds the national average in almost all of West Virginia's counties.

Data from the nationwide Behavioral Risk Factor Surveillance System, based on systematic monthly telephone surveys that estimate the prevalence of behaviors and lifestyles responsible for unnecessary disease, disability, and death, offer a likely explanation for much of the excess cardiac mortality in this state. Results from the 1984 and 1985 surveys (23), and from 1986 and 1987 (unpublished, West Virginia Department of Health) consistently show West Virginia to have the highest or one of the highest prevalence rates among participating states for each of four major coronary disease risks: elevated blood pressure, smoking, obesity, and lack of regular exercise. No population-based data are available for serum cholesterol. While greater access to medical services would probably enhance survival for many West Virginians with heart disease, these surveys suggest that addressing the lifestyle-related risks will provide an even greater opportunity for intervention.

The Carter Center of Emory University estimates that about 45 per cent of the cardiovascular disease deaths could be prevented with widespread application of currently available knowledge (24). By utilizing cost-effective health education methods to address several risk factors simultaneously, community-based intervention projects have created the potential for averting a large portion of the heart disease burden (25). Focusing on smoking reduction, blood pressure control and dietary change, the North Karelia Project (26,27) and Stanford Heart Disease Prevention Project (28) are two models that have successfully reached the majority of the target populations and have resulted in substantial risk reduction.

"The severity and extent of the current problem in West Virginia is underscored by the observation that premature death (before age 65) from heart disease exceeds the national average in almost all of West Virginia's counties."

Intervention technologies are currently being applied in seven West Virginia communities designated as PATCH (Planned Approach to Community Health) sites. In the seven communities, volunteer networks have been organized and trained to analyze local health problems, set priority objectives, and establish interventions. Based on local mortality rates, risk-factor prevalence and community opinion, five of the seven sites have selected heart disease as the priority health issue, and have focused on single interventions such as cholesterol awareness, smoking prevention, and reduction of sedentary lifestyle. While resources have been limited and the programs do not yet address multiple interventions, PATCH in West Virginia represents an important step toward establishing community agendas for prevention and control of disease.

In conclusion, both the alleviation of modifiable factors associated with the occurrence of coronary disease (primary prevention) and therapeutic advances (secondary and tertiary prevention) have contributed to the decrease in deaths from heart disease. Because so much of it is still preventable, heart disease remains an important national health issue. In West Virginia, where the death rates are among the highest in the United States, interventions must target the existing high prevalence of avoidable risks with programs to focus on blood pressure control, smoking prevention/cessation, lowering saturated fat and cholesterol intake, weight loss and regular exercise.

State and local health departments should promote awareness of personal risks, encourage and facilitate behavior change, reinforce positive health habits, and provide guidance and support for communities willing to initiate large-scale risk-reduction efforts. Historical successes show that addressing multiple risk factors simultaneously through application of community health education strategies is a reasonable objective with attainable goals.

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Workers Under Stress*

Self-Reported Health and Well-Being of Weirton Steel Workers Before and After Becoming an ESOP Company

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The adverse effects of stress on physical and emotional well-being have long been known. While there have been studies in the past on the relationship between overall health and stress in the workplace, the study reported here is unique to the state of West Virginia and to the nation. This study was conducted on workers at Weirton Steel Company after the formation of an Employee Stock Ownership Plan (ESOP). Weirton Steel is not only one of the major employers in this state, but it is also the largest ESOP in the nation.

This was a follow-up study to one previously reported in this Journal in February, 1984 ("The Forging of Illness"). Our analysis of the information gathered in the two surveys indicates a strong adverse relationship between workers' sense of well-being and job-related stress. Of special concern are two groups which seem to be particularly affected: the formerly laid-off workers and those who took retirement during the ESOP transition.

Physicians should be sensitive to this relationship and should be a source of support for affected workers and their families.

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Introduction

As health practitioners, we are concerned with how individual life experiences and behaviors impact on mental and physical well-being.

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Occasionally there are events that are of such a large scale that they are presumed to have health consequences for whole communities. In the United States during the past decade or so, plant closings and reductions in force have had a telling effect on the social fabric of our industrial heartland. Studies of the personal and community costs of large scale unemployment and economic crisis date back to the Great Depression, but recent events have stimulated renewed interest in this topic (Liem and Raymon, *American Psychologist,* October, 1982).

Particularly hard hit by what has come to be called "deindustrialization" has been the United States steel industry. In the early 1970s almost half a million Americans were still employed by the steel industry that produced almost half of the world's total output. By 1987, only 160,000 steel jobs were left in the United States, and our percentage of world production was only in the teens. During the 1980s the threatened closing of the Weirton, West Virginia, steel mill loomed over the state's northern panhandle, promising the same devastation experienced by the string of satellite communities stretching along the Monongahela River southeast of Pittsburgh. The small communities of West Virginia's steel producing region, due west of Pittsburgh were bracing for the shock waves that would come with 8,000 lost jobs. The 3,000 or so already on lay-off during the preceding few years were a grim foreshadowing of the dislocation that seemed to be in the offing.

This paper will report on two surveys of the emotional and physical well-being of a sample of Weirton Steel workers conducted two years apart. The first survey was undertaken in the Spring of 1983 during a period of great uncertainty as to the future of this large mill. Indeed, it was done in anticipation of the vote in September, 1983, on whether, faced with a major scale-down, the workers would accept a large pay and benefits cut and sever their tie to the parent conglomerate (then National Steel Company). The proposal was to reorganize under an Employee Stock Ownership Plan (ESOP) which would turn the Wierton workers into "employee-owners."

Survey II was designed to reinterview the same respondent two years later in the summer of 1985 during the early phase of the ESOP reorganization.

Background

The Weirton Division of National Steel developed a reputation for high-quality tinplate (a reputation it still enjoys), and over the 30 years of 1947-77 Weirton Steel grew into West Virginia's largest single-site employer (with about 12,000 employees) and the state's largest tax payer. The parent company, National Steel, grew to be the fifth largest steel company in the United States. These were the "golden" years as successive generations sought the security and high wages offered by this company with its independent union. Wages and benefits averaged $3.00 an hour above the industry average, making Weirton Steel employees the best paid in a well-paid industry.

"Given the boom/burst nature of many of the industries in West Virginia, it is important that physicians recognize how economic forces can undermine the physical and mental well being of members of the community."

The high wages and comprehensive benefits were but one aspect of this paternalistic, "welfare state" company. There was lifetime employment made possible by a ladder of mobility within the large diversified mill, and the company drew few lines between itself and the community.

The company paid most of Weirton's property taxes and gave generously to local schools, hospitals, libraries, even building the community center. For years, the president of Weirton Steel also served as mayor of the city.

Following this period of prosperity, things began to go stale, not only for Weirton and its parent company, but for the whole industy. Increasing competition from other materials, i.e. plastics and glass and particularly from modernized and competitive world steel producers, caused National to go for quicker and easier profits. As National quietly diversified into Savings and Loan companies with ventures in malls, real estate, and insurance, it decreased its investment in Weirton's physical plant. By the 1980s Weirton Steel faced serious pollution control problems. It found itself unable to operate its coke batteries and sinter plant and, because of the world steel glut, it realized only a one-per cent profit as compared to other United States plants that were operating at a loss.

In March of 1982, after several years of reducing the work force, National dropped a bombshell. Despite warning signs, the announcement was unexpected by the employees. In the face of the parent company's $400 million losses, National Steel announced that it was prepared either to 1) close the Weirton mill entirely; 2) reduce it to a 1,500-person finishing mill; or 3) offer to let the employees buy the mill.

For the next 18 months until the September, 1983, vote, Weirton was the focus of world-wide attention. Critics from the political left and the right assailed the proposed worker buy-out. There was anxiety on the part of the mature work force over the safety of their pension while younger workers had an intense desire to remain employed at any cost. There was a lack of familiarity with the concepts of worker ownership and control, and apprehension over obtaining the $1 billion investment required for the mill to be competitive. Furthermore, the world steel market had reduced the United States industry to less than 40 per cent of its capacity. This was

"Mon Valley" is a 20-miles strip along the Monongahela River, south and east of Pittsburgh that, for 100 years, had been the center of American industrial production. Communities such as Homestead, Clairton, Braddock, Munhall, Hazelwood and McKeesport made up the industrial suburbs of Pittsburgh which housed dozens of major steel mills.

the context within which Survey I was conducted.

It is important to say what was NOT part of this situation. This was not a plant shutdown throwing everyone out of a job. This was not (though it might have become) the "Mon Valley"* with abandoned plants and devastated communities. This was a region caught in an ambiguous and stressful situation upsetting long-held beliefs and practices but also having a possibility of new choices and options. It was in this context that we conducted Survey I in May and June of 1983.

Methodology of Surveys

From a computer list of the 7,000 currently employed and the 1,000 most recently laid-off employees, a 1:8 random sample was drawn from each of the several broad employment categories: a) the salaried (several layers of managerial and supervisory personnel); b) clerical and lower-level technical employees; and c) the large number of blue-collar, "hourly" employees. A random sample of the recently laid-off in each of the above subsets was also chosen. In all, 1,045 names were selected.

A great deal of time and effort was expended in contacting the entire sample, but 20 per cent (266) could not be interviewed because they had no telephone, or their phone had been disconnected, or they had unlisted numbers. An additional 10 per cent were refusals. Survey I was a telephone interview which lasted on the average about 15 to 20 minutes. The interviews were conducted by 35 school teachers from the area who were specially trained for this purpose.

When Survey II, the follow-up, was conducted in the summer of 1985, all of the 674 successfully interviewed individuals were again contacted. This time a pre-coded, self-administered questionnaire was mailed to them with a postage-paid, addressed envelope. To get maximum response, this was preceded by a postcard and followed up by a series of letters or replacement questionnaires where necessary. As a result, 60 per cent (407) usable questionnaires were returned. While both Survey I and II suffered some attrition, there did not appear to be any systematic bias such as excessive losses from one job class.

Demographic Profile

Since the health and illness of a population are obviously highly correlated with such demographic variables as age, sex and marital status, we begin our analysis with a brief portrait of the sample. We should first note the possible influence of the "healthly worker effect" which assumes that there is a selective departure of the more impaired individuals, leaving behind a healthier population.

Survey I (1983) revealed Weirton Steel employees to be primarily a white (97 per cent), male (93 per cent) middle-aged population, with 50 per cent of the active blue collar work force being between 46 and 65 years of age. Incidentally, this age structure figured prominently in the negotiations because of its connection to retirement patterns and pension obligations of the parent company. Since lay-offs were based on seniority, it is not surprising that this group was composed primarily of males under 35 years of age. Both the active and the laid-off workers are family types, with about 90 per cent of both groups currently married, and three fourths having between one and three children. Only in the clerical and technical category was there a contingent of young (under 35), unmarried, females and males.

> ***"... the uncertainties and, for some, the economic dislocations during this transition took their toll ..."***

This is primarily a high school-educated population (with 61 per cent of the total sample having a high school degree). The younger, laid-off workers are better educated as are also the salaried (managerial ranks) and the clerical/technical employees. The pre-ESOP salary distribution gives an indication of the extent to which the majority of the actively employed had attained a middle class lifestyle: 71 per cent of the currently employed blue-collar workers earned over $30,000, and indeed a quarter reported incomes of over $40,000.

Anyone who knows the steel communities of Western Pennsylvania can attest to the strong ethnic character of that population. This is also true of the Weirton Steel sample, with fully 61 per cent claiming an ethnic identity. Italians, Irish, Poles, Slavs and other central and eastern European ethnics contribute to the cultural richness of this region.

Thus, in considering the health and well-being of our sample, it is important to realize that this was not a transient, humbled, disorganized work force. On the contrary, we found a solid, stable, affluent, family-oriented population, proud of their ethnic and religious affiliations.

Mental and Physical Health

The bulk of Survey I and II was structured around questions of the work environment, the organization and functioning of the mill, the assessment of the current crisis, how and why they intended to vote on the ESOP (I) and the changes the ESOP had brought or not brought to their particular section and their level of satisfaction with these organizational changes (II).

Included in each protocol was a series of personal items which attempted to measure the degree of stress the workers were experiencing during these tumultuous years. One set of items in Survey I asked "whether things had gotten better, stayed the same or gotten worse for you in the past year (while the buy-out negotiations were still in progress)." We asked this question about their marriage, family relationships, physical health and emotional and mental health. In Table 1, we see the percentage in each of the several job classifications (including the laid-off group) who report that things had gotten "worse."

The most obvious finding exhibited here is the impact that unemployment was having on the young men who had been idle, doubling up with in-laws and dependent on their wife's income. Over one fourth (27 per cent) of these individuals report worsened emotional health, double the percentage for the middle aged, hourly workers who were better insulated from the events that swirled around them. The laid-off group

TABLE 1
% Reporting "Got Worse in Last Year" *(Survey I, Pre-ESOP)*

	Salaried	*Clerical/Technical*	*Hourly*	*Total Laid-off*
Marriage Got Worse	3	4	4	19
Family Got Worse	2	10	4	17
Physical Health Got Worse	11	14	13	16
Emotional Health Got Worse	18	18	13	27

TABLE 2
Compared to How Things Were for You in 1982, Would You Say Your Situation is Worse, Same or Better? *(Survey II)*

	% Worse		
	Previously Laid-off	*Active Workers*	*Now Retired*
Physical Health	11	11	26
Emotional and Mental Health	23	16	26
Marriage and Family Life	10	9	17
Outlook for future	27	25	32

TABLE 3
Percentage Agreeing with Statements by Job Classification *(Survey I)*

	%Agreeing			
	Salaries	*Clerical/Technical*	*Hourly*	*Laid-off*
Feel Tense and Anxious Most of Time	29	40	37	49
Been Having Difficult Time Sleeping	15	15	14	23
Feel Tired Much of Time	25	23	22	25
Much of Time Feel Blue or Sad	11	13	8	20
Feel Cross and Grouchy	14	21	13	23

TABLE 4
% Distribution of Mental Health Score *(Survey I)*

	Poor (4-5 score)	*Fair (1-3 score)*	*Excellent (0 score)*
Mental Health Score	14%	37%	49%

TABLE 5
Age and Mental Health Score *(Survey I)* % Distribution

	Age <34	*35-44*	*45-54*	*55 plus*
Poor	16	9	16	13
Fair	30	41	37	45
Excellent	54	50	47	43
	100%	100%	100%	100%

TABLE 6
Physical Health and % in each Mental Health Category *(Survey I)*

		Physical Health		
		Better	*Same*	*Worse*
Mental Health Score	Poor	7	10	38
	Fair	34	37	47
	Excellent	59	53	15
		100%	100%	100%

also reports higher levels of distress in their marriage and family relationships.

We reinterviewed (Survey II, Post-ESOP) these people two years later and we see (Table 2) that the formerly laid-off individuals who are now back to work seem to be coming down to the same levels as the rest of the sample on these items except for their emotional and mental health. Like Vietnam veterans, there is a "post traumatic stress" syndrome at work here too, with the emotional scars lingering on.

In Table 2 we also are able to examine how the 42 persons fared who retired after Survey I. On every item they have a higher percentage who report being worse off. We cannot be certain how much of this can be explained by their age and how much on the somewhat involuntary nature of their retirement. Many people took an early retirement out of concern that their pension and benefits would be jeopardized under a fledgling, employee-owned company. They seem now not to be faring as well as the active work force.

Included in both surveys were psychiatric symptom items which are conventional indicators of anxiety, depression, somatization and drug and alcohol use. In an earlier article (Weisser, Heavner and Holton: "The Forging of Illness," *West Virginia Medial Journal,* February, 1984) our colleagues reported the much higher incidence of depression, anxiety and alcohol abuse among the laid-off workers as compared to the currently employed. In Table 3, we look more closely at these items, breaking the employed group into the several job strata.

In addition to the employed/laid-off differences already noted, fully 40 per cent of clerical and technical group reports tension, anxiety, sadness and irritability; they are also higher on "feeling grouchy" (Table 3). Across all job classes there is a high level of fatigue and anxiety reported.

To facilitate further analysis, we combined these five items into a composite score which could range

from 0 for no positive responses to five for a "yes" on all of the items. We then collapsed the scores into three steps on a continuum of mental health. Using this measure, we can report that at the time of the ESOP vote, half (49 per cent) of the employed sample report "excellent" mental health while 14 per cent were in "poor" mental health. By way of a national frame of reference, the NIMH-sponsored survey of 17,000 adults at five sites, using DSMIII categories, reports that "five to six per cent had an emotional disorder such as depression while seven to 15 per cent had an anxiety disorder."[1]

Is there a relationship between age and mental disorder? In the NIMH epidemiological studies referred to previously, the researchers expected to find "that older people had more mental problems." They report that "other than cognitive impairment, this does not appear to be the case."[2] Our data presents a mixed picture. It can be seen from Table 5 that there is a smooth, downward gradient from the younger age groups, with 54 per cent with "Excellent" mental health, to only 43 per cent in the over-55 age category. Employees between 35-44 have the smallest per cent (nine per cent) with poor mental health. This may be attributed to the fact that these workers were the least affected by the economic vicissitudes: the threat of lay-offs faced by the younger men on the one hand, and the uncertainties and insecurities associated with retirement on the other.

What is the connection between mental and physical health? We see dramatic evidence of this relationship (Table 6). Over 50 per cent of those who say their physical health during the past year was the same or better reported no psychiatric symptoms. However, only 15 per cent of those whose health deteriorated were symptom-free. The same steep gradient is evident for ill health and mental health symptoms: poor physical health is associated with the greater likelihood of emotional symptoms. Of course, this only shows the correlation, not the causal direction: does poor health lead to emotional distress or vice versa?

Although we are dealing with self-appraisal rather than clinical diagnosis, our Mental Health Score seems to be a shorthand method of catching psychological distress. This is dramatically illustrated in Table 7 where we see the very high association between our five-item scale and social relations, economic distress and a self-assessment of one's mental health. If a Weirton employee reports that "my marriage has gotten worse," he is much more likely to have a "poor" score on the mental health scale: 49 per cent of those whose marriage was reported as worse had poor mental health compared to 10 per cent and 12 per cent for those whose marriage was now better or the same as before. An almost identical pattern is also evident for "family relations." People who assess their own mental health as having "gotten worse" also were much more likely to report more symptoms.

"We were somewhat surprised with the high levels of reported psychological ill health even among the active workers who were believed to be least vulnerable to the economic events that existed at that time."

In our earlier discussion (Table 2) of the poorer physical and emotional state of those workers who retired after Survey I, we speculated as to the impact of age as opposed to the possible traumas of the retirement itself. We now have some evidence that it may be neither of these. The data suggests (Table 8) that there may have been a process of selective retirement: 44 per cent of those with a "poor" mental health score said that they were thinking about or taking an early retirement. This compares with 38 per cent in "fair" mental health and only 28 per cent in "excellent" mental health.

By the time of Survey II, the financial turnaround at Weirton Steel had begun, but two thirds of our sample reported a worsening of their personal situation. The ESOP had kept the mill alive although 75 per cent reported that they still did not feel like "owners," and an even higher percentage (87 per cent) say they "have little influence on decisions." There is continued apprehension over the safety of their pensions (45 per cent), but a resounding 70 per cent agree that "the future of Weirton Steel looks brighter than ever."

We see the high level of somatic complaints, particularly of tension and depression (Table 9). There is a continuation of the pattern of highest rates of discomfort among the retirees: more than half complain of regular or fairly often upset/sour stomach, and of being downhearted or blue. The previously laid-off workers, who are primarily in their 30s, report rates lower than the retirees but higher than those workers never laid-off.

About a fourth to a third of the active employees report tension and depression, having experienced these symptoms regularly in the previous year. As in Survey I, there seems to be a low incidence of reported alcohol abuse, with only about five per cent reporting this problem. This is the only item that the active workers experienced in greater numbers than either the retired or formerly laid-off who reported virtually zero per cent.

Another interesting finding is presented in Table 10 concerning the mental health of the spouse. The respondents, predominantly males, were asked, "Have either you or your spouse (if currently married) experienced these complaints regularly during the past year?" We can see (Table 10) that the respondents are much more likely to report that they have these problems: the percentage for the respondents is two to four times as high on every symptom item. Only on the "took medication to calm

[1] "Behind the Boom in Mental Health Care," *American Demographics*, p.34, Nov. 1987.
[2] op.cit

nerves" item is there parity with their spouse. Either the respondents are under-reporting their spouses' symptoms or it is the steel workers, not their wives, who were experiencing greater stress and converting it into physical and psychological symptoms. If indeed this is an accurate portrait of spouses' symptoms, it would be at some variance with other studies which indicate that women have higher rates of such disorders while males are more inclined to alcohol and drug abuse and to "acting out" behaviors. Only five per cent of the sample said that *they* regularly "needed a couple of drinks to get going," but zero per cent report this for their spouses. We don't know how to interpet this respondent/spouse difference, and believe that future research should investigate how spouses cope with such economic turmoil.

The last part of our analysis concerns reported workdays missed due to accidents, physical illness or personal problems. The reader should be cautioned that these data are not from official records and may be influenced by over or underreporting. We see (Table 11) that six per cent lost days to work injury, and two thirds of these were for extended periods (over six days). One quarter of the sample (26 per cent) were out one-three days because of illness, with an additional 15 per cent missing work for more than four days. What is perhaps unexpected is that 22 per cent report being out because of "personal problems." This report is certainly consistent with the earlier reported data on symptoms of psychological distress.

Once again we see the lingering effects of having been laid-off. This disarray of personal and family life must have been so profound for the laid-off that their current adjustment seems to be still impaired. We see further evidence of that trauma (Table 12). In each of the categories, injury, illness and personal problems, the formerly laid-off workers report a much higher absence rate due to personal problems: 37 per cent as compared to only 14 per cent for the never-laid-off workers.

TABLE 7
% with Poor Mental Health Score (I) and Whether Things Got Better, Worse, or Stayed the Same

	% With Poor Mental Health		
In past year things got	*Better*	*Same*	*Worse*
Marriage	10	12	49
Family Relations	12	11	48
Standard of Living	14	10	25
My Mental Health	9	6	51

TABLE 8
Retirement Plans and Mental Health *(Survey I)*

	Mental Health Score		
	Poor	*Fair*	*Excellent*
Taking Retirement or Thinking about It.	44%	38%	28%

TABLE 9
Psychological Distress Items % Experiencing These Symptoms REGULARLY in Past Year *(Survey II)*

	Retired	*Were Laid-off*	*Active*
Upset or Sour Stomach	59%	35%	21%
Tension Neck/Back	59	49	36
Felt Nervous or Shaky	53	39	27
Felt Easily Irritated or Annoyed	63	44	43
Trouble Getting or Staying Asleep	67	35	32
Downhearted/Blue	61	47	35
Had Trouble Remembering	30	29	23
Took Medication to Calm Nerves	36	6	9
Need Couple Drinks to Get Going	—	1	5

TABLE 10
Psychological Distress of Self and Spouse *(Survey II)*, Total Sample

	Self Only	*Spouse Only*	*Self & Spouse*	*Neither*	*Total*
Upset/Sour Stomach	20%	9%	11%	60%	100%
Tension in Neck/Back	26	17	14	43	100
Nervous/Shaky	21	8	10	61	100
Easily Irritated	29	7	18	46	100
Getting/Staying Asleep	21	8	13	58	100
Downhearted/Blue	25	6	14	55	100
Trouble Remembering	20	5	5	70	100
Nerve Medication	6	7	3	84	100
Need Couple of Drinks	4	—	1	95	100

TABLE 11
% Who Missed Work Days in Past Year *(Survey II)*, Total Sample

	% Missing Work Days		
	Work Injury	*Physical Illness*	*Personal Problems*
None	94	59	98
1-3 days	1	26	19
4-6 days	1	7	2
More than 6	4	8	1
	100%	100%	100%

TABLE 12
Reported Days Lost: Laid-off Compared to Active Workers

	Active	*Formerly Laid-off*
Days Lost due to Injury	4%	10%
Days Lost due to Illness	39%	49%
Days Lost due to Personal Problems	14%	37%

Summary

This report is based on two surveys of a representative sample of worker/owners of The Weirton Steel Corporation. Survey I was done during the spring of 1983 shortly after the parent company, National Steel, announced its intention to either close the mill or down-size it. The month before this survey, a tentative agreement was reached for a complex deal for the workers to "buy" this large steel mill and take approximately a 20-per cent cut in wages and benefits. Within two months, the workers would go to the polls to vote overwhelmingly (about 80 per cent affirmative) to accept this new contract and the formation of an Employee Stock Option Plan (ESOP), making it the largest ESOP in this country. Exactly two years later, these same worker/owners were reinterviewed.

In the four years since Weirton Steel began its new life as an employee-owned enterprise, it reported successive quarters of profitability and distributed, as per agreement, $15 million in profit sharing. New equipment, greater employee participation and a strong upturn in the demand for steel, contributed to make 1987 an outstanding year. Weirton Steel embarked on a $500 million capital improvement program to revamp the hot mill, for new equipment in the finishing mill, and to meet environmental regulations. Most observers now are cautiously optimistic about Weirton's survival.

But the uncertainties and, for some, the economic dislocations during this transition took their toll. Two groups that seem to have been especially affected were the laid-off and the retired. The workers who were put on lay-off status back in 1982 and 1983 reported, in mid 1983, very high levels of marital and family disfunction. They also reported worsened physical and emotional health. The 1985 survey reveals the persistence of these problems even after recall to active employment.

Those workers who opted to retire as the mill went ESOP also reported significant health complaints. There was a foreshadowing of this in Survey I, as those who anticipated early retirement, reflecting their concern and displeasure at the turn of events, exhibited poorer mental health.

We also find an important connection between reports of physical complaints and poor mental health. Poor mental health is also associated with a worsening of marriage and family relationships. We were somewhat surprised with the high levels of reported psychological ill health even among the active workers who were believed to be least vulnerable to the economic events that existed at that time. The tendency for our respondents to report higher levels of physical and mental distress for themselves as compared to their spouses was another interesting finding that bears further investigation.

Given the boom/bust nature of many of the industries in West Virginia, it is important that physicians recognize how economic forces can undermine the physical and mental well being of members of the community. Even the threat of economic disruption can impact on communtiy members whom we see as patients. This effect can persist long after the resolution of the economic threat. As physicians we must be sensitive to this problem and be prepared to offer our support and assistance.

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2. Weisser RJ, Heavener R, Holton D. The Forging of Illness. West Va Med J 1984; 80:25-28.
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1988 Van Liere Memorial Research Convocation

The 1988 Van Liere Memorial Research Convocation for students in the West Virginia University School of Medicine was held on March 31. These yearly convocations enable students in the School of Medicine to present the results of their research activities in competition for the Edward J. Van Liere Award and other prizes.

The Van Liere Award, consisting of a plaque and a check for $200, was established in 1965 by the action of the faculty of the School of Medicine to recognize the research efforts of the students and to honor the late Edward J. Van Liere, M.D., who served as Chairman of the Department of Physiology from 1921-1955 and as Dean of the School of Medicine from 1935-1961.

The competition is organized into two categories—the Graduate Student Research competition and the Van Liere Award competition, the latter category open only to students presenting data from research done by them as undergraduate or medical students. Eighteen students participated in the 1988 Convocation, 10 in the Van Liere Award Competition and eight in the Graduate Student Research competition.

The winner of this year's Van Liere Award (the 24th) was Joel Michael, a second-year medical student. The first runner-up and winner of a check for $100 was Anne Lapp, a physical therapy student, and the second runner-up and winner of a check for $50 was John Schaefer, a fourth-year medical student.

The first prize in the Graduate Student Research competition, a check for $200, was awarded to David Boehm, microbiology and immunology; the second-place prize, a check for $100, was awarded to Dori Thomas, pharmacology and toxicology, and the third-place prize, a check for $50, was awarded to John Forney, medical technology.

The publication of the abstracts of the winning presentations in *The West Virginia Medical Journal* is an important and greatly appreciated recognition of the research efforts of our students.

W.E. Gladfelter, Ph.D. *Chairman*
Van Liere Memorial Research
Convocation Committee

An Evaluation of Endotracheal Glucagon for Treatment of Hypoglycemia

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STEPHEN C. RECTOR, M.D.

In the event of acute hypoglycemia a medical emergency, intravenous Dextrose 50 per cent is the treatment of choice. However, prehospital emergency personnel often are unable to gain intravenous access, and are limited to other parenteral routes; i.e. intramuscular (IM) and subcutaneous (SC). In such cases, glucagon is used as a second-line emergency drug for treatment of acute hypoglycemia. Although this is the best therapy currently available in these situations, in patients with circulatory compromise there may be less than optimal distribution of the drug when given by IM or SC routes.

Endotracheal (ET) administration is an accepted method for delivery of several emergency drugs. This route rivals intravenous administration in its capacity to establish rapidly therapeutic blood levels. Like other polypeptide drugs, glucagon has yet to be evaluated for its effectiveness as an endotracheal agent. The purpose of this study was to evaluate glucagon as such an agent in the treatment of hypoglycemia.

Hypoglycemia was induced via controlled insulin infusion in five mongrel dogs in two separate treatments. In the first treatment, the dogs were administered glucagon by either the ET or the IM route, and then serial blood samples were collected. After a seven-day recovery period, the same procedure was followed, but the dogs were administered glucagon by the alternative (ET or IM) route. Arterial blood gases were evaluated to detect any possible early pulmonary toxicity.

IM administration of glucagon resulted in significantly higher blood levels of both glucose and glucagon when compared with ET administration of those drugs ($p < .025$). Only one of the five dogs receiving ET administration of glucagon showed *any* rise in glucose or glucagon after drug administration, and the increase was modest in comparison with the mean increase due to IM glucagon administration.

**Note: This abstract describes work also presented at the University Association for Emergency Physicians annual meeting in May, 1988, at Cincinnati, OH. The work is also currently submitted for national journal publication—JCM.*

Ability of Healthy Subjects to Distinguish Between Same and Different TENS Waveforms by Sensation

ANNE K. LAPP
Physical Therapy II, Morgantown, West Virgina
MARY BETH HARRIS, Ph.D.

Transcutaneous Electrical Nerve Stimulation (TENS) waveform has been a subject of controversy in recent years. Some authors feel that a biphasic waveform is more comfortable or more effective than a monophasic waveform while others have found the opposite result. The conflict that arises between these two views may be due to a lack of controlled study of waveform alone. The purpose of this study was to determine if normal, healthy subjects could accurately distingush between same and different waveforms.

Twenty healthy volunteers were presented with four pairs of stimulation waveforms through surface electrodes on the dorsum of the dominant hand. Two pairs consisted of the same waveform and two pairs consisted of different waveforms; thus each subject served as his/her own control in this repeated measures design. After each pair presented, the subject was asked to mark whether the stimulations felt the same or different.

The subjects were able to distinguish the pairs of different waveforms at a significance level of one per cent using a chi square test ($X^2 = 12.8$, $p = .01$). Since healthy subjects were able to perceive a difference in sensation based entirely on TENS waveform, this parameter should be considered in the efforts to arrive at an optimum waveform for clinical use.

Effect of Cardioplegia With Moderate Hypothermia on Isolated Working Rat Hearts

JOHN J. SCHAEFER
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RONALD C. HILL, M.D.

In the repair of congenital heart defects the advantages and limitations of cardioplegic protection are not as well defined as in the adult. Previous reports suggest that the ischemic time and degree of hypothermia may be as important to myocardial preservation as the use of cardioplegia. In this study the benefit of adding cardioplegia is investigated at a hypothermic range of 20°C with an ischemic period of 45 minutes.

Using the isolated rat heart preparation, Sprague-Dawley rats weighing 350-450 gm had their hearts extirpated and placed on a modified Neely/Langendorff apparatus with a preload of 10 cm H_2O, and afterload of 70 cm H_2O, at a temperature of 37°C. Control hearts were subjected to 45 minutes ischemic arrest at 20°C while treated hearts received two and one half minutes retrograde potassium cardioplegia (4°C) followed by 45 minutes ischemic arrest at 20°C. Hearts were returned to the working mode at 37°C. Cardiac output (ml/min), heart rate (beats/min) and dP/dT (mmHg) were recorded at five-minute intervals for 30 minutes during reperfusion. Data were compared using Student's t-test for independent samples and reported as mean ± SEM.

	C.O.	H.R.	dP/dT
Before Arrest			
Control (N = 10)	49.0 ± 1.66	267 ± 6	6153 ± 288
Cardioplegia (N = 10)	48.8 ± 1.24	261 ± 5	6260 ± 126
P Value	NS	NS	NS
After Arrest			
Control (N = 10)	43.29 ± 1.57	249 ± 6	5830 ± 206
Cardioplegia (N = 10)	43.98 ± 1.03	246 ± 4	5916 ± 110
P Value	NS	NS	NS

For isolated rat hearts subjected to ischemic hypothermia at 20°C for a period of 45 minutes, potassium crystalloid cardioplegia does not show a significant functional benefit, suggesting cardioplegia is not necessary to protect the myocardium at 20°C.

Interaction of *Escherichia coli* Alpha-Hemolysin With Erythrocyte Membranes

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Department of Microbiology and Imunology

Escherichia coli alpha hemolysin (AH), an extracellular protein, lyses a broad spectrum of mammalian erythrocytes (RBCs), and is cytotoxic for PMNs and other cells. Hemolytic and cytotoxic activities are calcium dependent. The role of calcium in the binding of AH to RBC membranes was investigated. Sheep RBCs were incubated with AH in the presence or absence of calcium. RBC membranes were isolated and membrane proteins separated by SDS-PAGE. Immunoblots of the membrane proteins with an anti-AH monoclonal antibody showed that calcium was required for AH binding to RBC membrances.

The SDS-PAGE protein profiles of RBCs incubated with AH and calcium showed aggregation and proteolysis of RBC bands, 1,2,3, and 4.1. Identical protein profiles were obtained from RBCs incubated with calcium and a calcium inonphore, A23187.

The calcium-dependent aggregation and proteolysis were not associated with cell lysis. RBCs incubated with AH and calcium in the presence of an osmotic protectant did not lyse. The membrane protein profiles of these cells showed calcium entered the RBCs after AH was bound. These observations are consistent with a mechanism in which AH forms a transmembrane pore followed by osmotic lysis of the erythrocyte.

Bone Marrow Stromal Macrophage Production of Interleukin-1 (IL-1) is Altered by Benzene Metabolites

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MARK J. REASOR, Ph.D.
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Department of Pharmacology and Toxicology

Bone marrow stromal cells provide a supportive microenvironment for growth and differentiation of myelopoietic stem cells via the production of colony stimulating factors (CSFs). Bone marrow stroma is composed of fibroblastoid stromal cells and macrophages. Macrophage production of interleukin-1 (IL-1) stimulates fibroblastoid stromal cell production of CSFs. *In vitro* treatment of mixed stromal cell cultures with benzene metabolites alters the production of CSFs. This may occur directly, via alteration of fibroblastoid CSF production, or indirectly, via an effect on macrophage production of IL-1.

Our goal was to examine the dose-related effects of the benzene metabolites, hydroquinone (HQ), benzoquinone (BQ), phenol (PH), and catechol (CT), on the function of independent populations of fibroblastoid stromal cells and independent populations of bone marrow-derived macrophages. Fibroblastoid stromal cells or macrophages were cultured with different concentrations (100 um to 0.05 uM) of metabolite for various time periods, and the conditioned media was collected. Fibroblast stromal cell function was expressed as the capacity of fibroblast-conditioned media to stimulate the formation of granulocyte/macrophage colonies (G/M-CFU-C) in soft agar. Lipopolysaccharide (LPS)-inducible IL-1 production was used as an index of macrophage function.

Metabolites did not affect fibroblastoid stromal cell function except at a concentration of 100 uM as noted by a decrease in the ability of conditioned media to support G/M-CFU-C. In contrast, LPS-induced macrophage production of IL-1 activity was markedly inhibited by HQ and BQ and stimulated by CT and PH. These results indicate that benzene may exert its myelotoxic action by selectively influencing macrophage production of IL-1.

Differential Expression of Alpha-1-Antitrypsin Isoforms During Acute Inflammation

JOHN R. FORNEY
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KIRK M. GRIFFITH, M.D.
ROGER S. RILEY, M.D.

This case control study was conducted to determine the relative contributions of each of the three major alpha-1-antitrypsin (AAT) isoforms to the rapid serum increase this acute-phase protein demonstrates during periods of inflammation. A total of 35 control samples and 98 inflammatory case samples were analyzed in a two-step process. The initial step involved assaying four acute-phase proteins, alpha-1-antitrypsin (AAT), C-reactive protein (CRP), alpha-1 acid glycoprotein (AAG), and haptoglobin (HPT), to determine if laboratory evidence supported the clinical assessment of acute inflammation.

The case group mean values for all four acute-phase proteins were significantly elevated ($p < .005$) over the control group mean values, and substantiated clinical histories of infection, tissue injury, and other inflammatory conditions.

The second phase of sample analysis consisted of determining the AAT phenotype and quantifying the AAT isoforms present in each sample. The values obtained indicated a significant positive linear relationship ($r = 0.9334$) between the relative expression of isoform III and increasing serum AAT concentration with a concomitant decrease of isoform I in inflammatory sera. It was further noted that the more highly glycosylated isoforms (II and III) contributed greater than 80 per cent of the total AAT increase measured during the acute-phase response.

These findings strongly suggest that an AAT response to acute inflammation is characterized by both a relative and absolute increase in the quantity of the AAT isoform III in peripheral circulation, and potentially describe an early biological marker of acute inflammation in humans.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be prepared in accordance with "Uniform Requirements for Manuscripts Submitted to Biomedical Journals" (1) (International Committee of Medical Journal Editors).

The *West Virginia Medical Journal* will not consider for publication a paper or work that already has been reported in a published paper, or is described in a paper submitted or accepted for publication elsewhere.

Manuscripts, accompanied by one copy, should be typewritten, double-spaced, on one side only of white bond paper (8½ by 11 in.), with margins of at least one inch.

Use double spacing throughout, including (in the following order) title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: title page, abstract, text, acknowledgments, references, individual tables, and legends for illustrations. Number pages consecutively, beginning with the title page. Type the page number in the upper right-hand corner of each page.

All persons designated as authors should qualify for authorship. Each author should have participated sufficiently in the work to take public responsibility for the concept.

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Where reference is made to generically-designated drugs, the first such reference must be followed by parentheses containing the most commonly known trade-name drug of that designation. In addition, a listing of all generic drugs mentioned in the article, with their trade-name equivalents, should appear at the end of the article.

Tables (tabular listings) and figures (photos, drawings and charts) should be numbered and the point of reference in the text indicated in parentheses, i.e., (Table 1), (Figure 1).

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Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals (in parentheses).

No more than 25 references will be published free of charge to the author.

Use the style of references seen in this *Journal,* which is based on the formats used by the U. S. National Library of Medicine in *Index Medicus.* The titles of journals should be abbreviated according to the style used in *Index Medicus.* Consult "List of the Journals Indexed," printed annually in the January issue of *Index Medicus.*

All scientific material appearing in *The Journal* is reviewed by the Publication Committee. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 4106, Charleston, WV 25364.

1. Ann Intern Med 1982;96:766-71.

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President's Page

". . . there have been multiple attempts to contain costs in the name of 'quality,' and now it appears to be in the name of 'physician equity of payment.' "

Cost Containment or Equity of Payment?

At the Interim Meeting of the AMA coming up December 4 in Dallas, Texas, the delegates will be asked by the AMA Board of Trustees to approve or disapprove the Harvard Resource-Based Relative Value Scale (RBRVS or RVS). As you know, this is a concept for physician reimbursement based on time required for patient treatment, residency training and operational costs. This method of reimbursement was developed by economist William C. Hsiao, Ph.D., et al. at the Harvard School of Public Health under a contract from Health Care Finance Administration (HCFA).

The Harvard study was presented to HCFA in September of this year and is now being studied by the Physicians Payment Review Commission (PPRC) and by the AMA. The PPRC will make a recommendation to HCFA to adopt or reject the plan. The AMA supports the concept of the RVS but an endorsement will not be made until after the Interim Meeting.

The purpose of the plan, according to Doctor Hsiao, is to provide equity in reimbursement between the cognitive and procedural physicians. If that is the true intent, then physicians would be paid commensurate with their time, training and overhead expenses. But one must remember that there are other factors which are not included in the RVS formula, i.e. experience, severity of illness, different levels of competency, and levels of responsibility. There also appear to be biases built into the RVS program.

It seems that the intent of the federal government is to use the RVS as a method of cost containment. It is estimated that primary care physicians would increase their income by about 30 per cent to 40 per cent, with the procedural physicians having an equivalent reduction in income. Cost containment is not new to the federal government; in 1972, just six years after the start of Medicare, President Nixon placed a freeze on prices and wages which he later removed from everything except medical costs. Since that freeze, there have been multiple attempts to contain costs in the name of "quality," and now it appears to be in the name of "physician equity of payment."

At the present time, the West Virginia State Medical Association has not taken a definite stand on the RBRVS proposal. We have received letters for support from some specialty societies and verbal disapproval from others. We, as an Association, cannot be "anti-" everything that is proposed for control of cost, quality, or equity until we have a chance to study and evaluate it. But we will take a long, hard look at the RBRVS as it applies to the physicians in our state, and will continue to observe, study and be able to support or oppose the relative value scale when, and only when, we are certain that the decision is in the best interest of our members.
—Bill M. Atkinson, M.D.

Adding To Costs

Regulation, while undoubtedly necessary to some extent to protect the common good, has its own inexorable way of adding to the nation's health care bill.

Consider HCFA's currently proposed regulations to boost quality standards for laboratories. Addressing such issues as proficiency testing, personnel, and quality assurance, the rules have been proposed by HCFA in an effort to apply national criteria to labs even though various state laws and national professional organizations already regulate such labs. Some 4,500 independent labs and 6,600 hospital-based labs currently participate in Medicare and would fall under the proposed rule.

These rules, however, do not cover those physician labs which annually perform more than 5,000 tests on or for Medicare recipients. The Inspector General estimates it would cost $63 million to test all of the 34,000 physician office labs which offer Medicare services. Monitoring just 9,800 physician office labs would cost $35.4 million annually. HCFA currently spends $8.1 million per year monitoring the 4,500 independent labs mentioned above.

And where would the money for all this monitoring come from? You guessed it. All such labs would pay an annual registration fee of $425. But even at that, multiplying $425 times the 34,000 labs would produce only $14.4 million of the required money just to test 9,800 of these labs. Assumedly, the balance of the money would come from general funds or from other Medicare monies, which means there would be $21 million less to actually pay for patient care.

If every physician office lab doing Medicare patient tests paid the $425 registration fee and then recovered it from charges, it would mean that the lab doing exactly 5,000 such tests a year would have to add $.085 per service just to cover the cost of the regulation. While 8.5 cents is not a lot of money, will Medicare suddenly begin reimbursing the physician an additional 8.5 cents per test done? Of course not—it will just be another of those costs which is supposed to be absorbed by the physician along with the losses suffered through caring for Medicaid patients at below-cost reimbursement levels and the other uncompensated care which the doctor dutifully performs.

Perhaps the patient could be asked to pay 8.5 cents out-of-pocket for every test done. That money could then be dropped in the collecting jar and used to pay HCFA's registration fee. Of course this method might not work if the 8.5 cents were considered to be part of the physician fee and it put the fee over the MAAC limit.

Another approach might be to convince the doctor's office staff to accept a collective $425 less in salary increases for the coming year as their contribution to caring for the elderly patients. Or (perish the thought), the doctor just might have to order 40 or 50 more tests at $10 each to recover the cost of regulating his laboratory and then suffer the slings and arrows hurled at him for doing "unnecessary" testing. He might even find himself in court for defrauding the government. And if that happens and he gets to spend time in prison, the government clearly wins because then he won't be responsible for any testing or patient services for which Medicare would have to pay. After all, the best bill is the one you never have to pay because you never get the service.

It's a pity that once again it would be the patient who would suffer in this little scenario.

The real question to ask is why does the government insist on spending ever more money on regulations which duplicate existing services? These add to the health care cost picture which they then turn around and blame doctors for causing through "fee increases which exceed the rate of inflation."

Can anyone really blame doctors for taking early retirement and even choosing other career paths, which more are reportedly doing?—MGS

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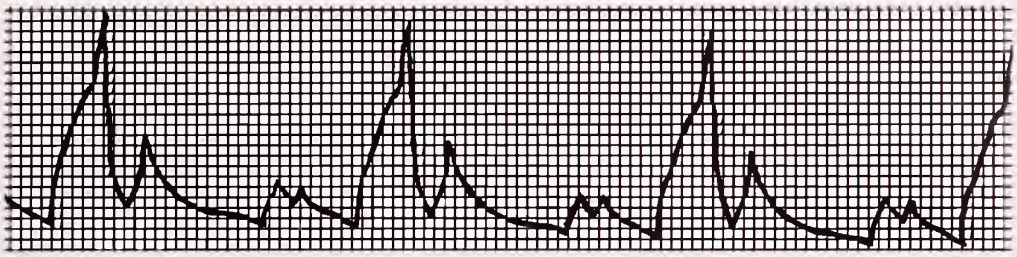

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'89 'Mid-Winter' Program Offerings

RBRVS, Insurance Benefits, Trauma

An American Medical Association official, state health insurance executives, and a West Virginia University physician will be included on the Saturday, January 28, program of the 22nd annual Mid-Winter Clinical Conference.

The continuing medical education event will open Friday afternoon, January 27, at the Holiday Inn—Huntington—Gateway, and end Sunday at noon. Sponsors are WVSMA and Marshall University and WVU schools of medicine.

James S. Todd, M.D., Chicago, AMA Senior Deputy Executive Vice President, will speak during the Saturday morning session, a "Potpourri"of Topics. His subject will be "The AMA View of Resource-Based Relative Value Study (RBRVS)." He also will be a speaker on "AMA's Alternative to Tort Reform" during the Friday evening Physicians' Session.

James S. Todd, M.D.

Janet G. Reed

James P. Boland, M.D.

Insurance Benefit Management

Speaking on "Benefit Management Program" following Doctor Todd will be Thomas S. Clark, M.D., Morgantown, Medical Director, Blue Cross and Blue Shield of West Virginia, Inc., and Janet G. Reed, R.N., M.S., Vice President, Benefit Management Program, Blue Cross and Blue Shield of West Virginia, Inc., Charleston.

Elizabeth A. Funk, M.D., Charleston, will talk on "Sociopolitical Aspects of AIDS" Saturday morning.

Charleston surgeon James P. Boland, M.D., will present a paper on "Surgery, A Changing Discipline: Trauma" during the Saturday afternoon session on "Surgery." Doctor Boland is Professor and Chairman, Department of Surgery, WVU Health Sciences Center, Charleston Division. There also will be talks in this session on "Breast Masses" and "Reversal of Coronary Artery Disease: Fact or Fantasy?" The latter, as announced previously, will be presented by Caldwell B. Esselstyn, Jr., M.D., Head, Section of Thyroid and Parathyroid Surgery, Department of General Surgery, The Cleveland Clinic Foundation.

Bill M. Atkinson, M.D., Parkersburg, WVSMA President, will open the Conference at 2 P.M. Friday with welcoming remarks.

The Friday afternoon session will be on "Occupational/Industrial Medicine," followed by the traditional Friday evening, concurrent, Physicians' Session and Public Session (see separate stories in this issue of the *Journal*).

"Unstable Miocardium," as announced earlier, will be the discussion area for the Sunday morning session. The speakers, as reported, will be:

Stafford G. Warren, M.D., Clinical Professor of Medicine, WVU Health Sciences Center, Charleston Division, "Current Status of Coronary Angioplasty;"

Harold Selinger, M.D., Director, Heart Institute of West Virginia, Charleston Area Medical Center, "Thrombolytic Therapy;" and Ronald C. Hill, M.D., Assistant Professor of Surgery, Department of Surgery, WVU School of Medicine, Morgantown, "The Evolution of Coronary Artery Bypass Graft."

Harvard Graduate

Doctor Todd, a general surgeon from Ridgewood, New Jersey, joined the AMA as Senior Deputy Executive Vice President in 1985. He was a member of the Board of Trustees from July, 1980, to June, 1984, at which time he was reelected a member of the Executive Committee of the Board as well as a Commissioner to JCAH from 1982-85.

Doctor Todd graduated cum laude both from Harvard College and Harvard Medical School. He interned and served his residency in surgery at Columbia Presbyterian Medical Center, becoming Chief Resident in 1963. He is a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons. From 1977-1985 he was Chairman of the Board of the New Jersey State Medical Underwriters, Inc., and is a Past President of the Physician Insurers Association of America.

Doctor Todd has been a Director of the Institute of Society, Ethics, and the Life Sciences (Hastings Center) and was a Councillor-at-Large of the Harvard Medical Alumni Association. His service to the community includes: Committee to Establish Guidelines for the Care of Comatose Patients, State of New Jersey, 1977; recipient of the Edward J. Ill Distinguished Physician Award of the New Jersey Academy of Medicine in 1980, and the Distinguished Service Award of the New Jersey Hospital Association.

Doctor Todd has published numerous articles dealing with health care and professional liability in various journals.

Board of Medicine Member

Doctor Clark, a WVSMA Councilor, is a member of the West Virginia Board of Medicine. Born in Welch, he is President and owner of both Clinical and Pharmacologic Research Incorporated, and Industrial Medicine Corporation. He was in private family practice in 1977-86, and currently is Clinical Assistant Professor in the Department of Family Practice, WVU School of Medicine, and Clinical Assistant Professor, WVU School of Pharmacy.

A 1976 WVU School of Medicine graduate, Doctor Clark's appointments include those as Chairman of the Board of Post +, Inc., a provider service telecommunication system for transmission of insurance claims; member of the Dean's Search Committee, WVU School of Medicine; President, Monongalia County Medical Society, and member, Federal Task Force, Medical Fraud Abuse, State of West Virginia, U.S. Attorney's Office, Charleston.

He did his undergraduate work at Bluefield College and WVU, and also holds an M.S. degree from WVU.

Doctor Clark is certified by the American Society of Clinical Pathologists (Medical Technology). He is the author or co-author of some 13 scientific articles, and has conducted a number of clinical and bioequivalency studies.

Utilization Review Director

Reed directs management of medical/utilization review statewide for Blue Cross/Blue Shield, and also serves as a professional health care liaison to Plan medical consultants and physician advisors.

She also is in charge of all areas of the benefit management program: admission precertification, individual case management, Workers' Compensation case management, and BMP computer and communications systems. She also directs management of charge validation, program integrity and quality assurance.

Reed was graduated as a Registered Nurse in 1959, received a B.A. degree in 1984 from West Virginia State College, and an M.S. degree in Adult Education in 1987 from Marshall University. She joined Blue Cross/Blue Shield in 1979 after 10 years of nursing in Charleston hospitals.

Post Held Since 1976

Doctor Boland, who has held his present appointment with WVU in Charleston since 1976, also is Chairman of the Department of Surgery at Charleston Area Medical Center, and Vice Chairman of Surgery, WVU Health Sciences Center, Morgantown. He is certified by the American Board of Surgery and the Board of Thoracic Surgery, and is the recipient of medical education, clinician and teacher awards from WVU in both Charleston and Morgantown.

Born in Philadelphia, Doctor Boland was graduated from St. Joseph's College, and received his M.D. degree in 1956 from Jefferson Medical College. He interned at Philadelphia General Hospital, and completed residencies at the Graduate Hospital of the University of Pennsylvania and the University of Texas Southwestern Affiliated Hospitals in Dallas.

He has made surgical visits to Vietnam, Nigeria, Arab Republic of Egypt, South Dakota (PHS Indian Hospital), Taiwan, Soviet Union, Haiti, and Pakistan.

Doctor Boland is the author or co-author of some 38 scientific articles.

Session Eyes Tort Reform Alternative

"AMA's Alternative to Tort Reform" will be the title for the Physician's Session during the 1989 Mid-Winter Clinical Conference (see accompanying story).

The program will be held from 7-9 P.M. Friday, January 27, at the Holiday Inn—Huntington-Gateway.

Speakers will be James S. Todd, M.D., Senior Deputy Executive Vice President, American Medical Association, Chicago, and Don R. Sensabaugh, Jr., Esquire, Partner in the law firm of Kay, Casto & Chaney, Charleston; and WVSMA legal counsel.

Michael M. Stump, M.D., Elkins, WVSMA Vice President, will be moderator.

Registration

The conference registration fee is $75, with checks to be made payable to WVSMA and mailed to WVSMA at P.O. Box 4106, Charleston, WV 25364. There is no fee for residents, medical students and nurses. The fee for non-members is $100.

The Holiday Inn-Gateway is offering a special room rate of $52 (single or double). Specify WVSMA when making reservations to obtain the special rate. Physicians outside the Huntington area who register with WVSMA in advance of the Conference dates will receive a room reservation form for the Holiday Inn-Gateway. When returning the form, be sure to list "WVSMA" on the "group name" line.

For additional information, contact Mary Hamilton at WVSMA, (304) 925-0342 or 1-800-257-4747.

Paper Presented

Ernest E. Hodge, M.D., Director of the Renal Transplant Program, Charleston Area Medical Center, attended the XII International Congress on Transplantation held in Syndey, Australia. He presented a paper titled "Conventional Immunosuppression after Deliberate Third Party Transfusion vs. Cyclosporine in Living Related Renal Transplant Recipients." The meeting addresses all types of transplantation.

Other Meetings With Conference

Other meetings, etc. are scheduled in conjunction with the 1989 Mid-Winter Clinical Conference to be held in Huntington, January 27-29 (see accompanying Conference story). They are:

Friday, Jan. 27

10 A.M.—Meeting, officers and executive secretaries, WVSMA's component medical societies. Bill M. Atkinson, M.D., President, presiding. Guest: Susan Kelsey, Account Executive, Membership Department, AMA, Chicago. *Luncheon at noon.*

5 P.M.—West Virginia Psychiatric Association. Larry C. Smith, M.D., President, presiding (Arrangements incomplete).

Saturday, Jan. 28

12 Noon—Council Luncheon, West Virginia Chapter, American College of Physicians. William O. McMillan, Jr., M.D., presiding.

12 Noon—Membership Luncheon, West Virginia Academy of Ophthalmology. Michael A. Fiery, M.D., President, Presiding. *Program* (1 P.M.): "Surgical Treatment of Thyroid Eye Disease," John V. Linberg, M.D., Associate Professor of Ophthalmology, WVU School of Medicine, Morgantown.

12:30—Luncheon, West Virginia Medical Political Action Committee (WESPAC). Esther Weeks, Chairman, presiding. Guest speaker to be announced.

6:30—Reception—Courtesy WVU School of Medicine.

7:30—Dinner, with Entertainment by the Renaissance Singers. Price of Dinner subsidized in part by McDonough Caperton Insurance Group, and Entertainment courtesy of Cabell County Medical Society. (Tickets for the dinner may be purchased at the WVSMA registration desk in the Exhibit Center.)

Sunday, Jan. 29

7:30 A.M.—Breakfast Meeting. West Virginia State Medical Association's Cancer Committee. Catalino B. Mendoza, Jr., M.D., Chairman, *Presiding.*

Gordon H. Deckert, M.D.

National Lecturer In Parkersburg

Gordon H. Deckert, M.D., of Oklahoma presented a seminar September 30 and October 1 in Parkersburg for area physicians.

The seminar, "Physician, Heal Thyself," was a professional self-enhancement program for physicians and their spouses. Doctor Deckert and his wife, Jane, simulated office situations from the viewpoint of physicians as they relate to the differences of individual patients encountered during one day in the office. On the second day of the conference, Doctor Deckert addressed the attitudes and differences of physicians as a whole. He used methodologies that let physicians uncover their real self and their attitude toward their profession.

More than 70 physicians and their spouses attended the two-day program.

Doctor Deckert is a David Ross Boyd Professor of Psychiatry and Behavioral Sciences at the University of Oklahoma. His professional interests include adult psychology, brain/behavior relationships, communication, evaluation of professional competence, group organization, psychosomatic medicine, the process of medical education, and the therapeutic sequence.

He is Past Chief of Staff of University Hospital and Clinics, a Fellow of the American Psychiatric Association, a Fellow of the American College of Psychiatrists, and a founding member of the Association of Academic Psychiatry. He currently is Chairman of the FLEX Component I Examination Committee of the National Board of Medical Examiners. In 1987, Doctor Deckert became the sixth individual to receive the Board's Distinguished Service Award.

He maintains a clinical private practice and a consulting and speaking schedule, nationally and internationally, and has been featured in the *Continuing Medical Education Bulletin* as one of the top three presenters in the United States.

The seminar was sponsored by the Mid-Ohio Valley Continuing Medical Education Program, the Academy of Medicine of Parkersburg, and Camden-Clark Memorial and St. Joseph's hospitals in Parkersburg. Contributors were Glaxo, Inc.; Merck, Sharp and Dohme; and Smith, Kline and French Laboratories.

Help Make Public Aware of Program!

"Graying of America" will be the focus of the Public Session for the 1989 Mid-Winter Clinical Conference Friday, January 27, at the Holiday Inn-Huntington-Gateway (see Conference story in this issue of the *Journal*).

The 7 P.M. program, held concurrently with the Physicians' Session, will be moderated by Warren Point, M.D., of Charleston.

Presenters will be:

Betty Rickenbacker, West Virginia Medicare Manager, Nationwide Insurance, Medicare Division, Charleston, "Just What Does Medicare Cover?;" Shirley Neitch, M.D., Associate Professor of Medicine; and Chief, Section of Geriatrics, Department of Medicine, Marshall University School of Medicine, "Financing Nursing Home Care," and William M. Midkiff, Policy and Rate Analyst, West Virginia Department of Insurance, Charleston, "Other Health Care Insurance Needed by the Elderly."

WVSMA officers and members are being asked by the Program Committee to make patients and other lay persons with whom they come in contact aware of the public program and encourage their attendance. Both personal contacts and local notices to the public by component societies through the media and other means are suggested.

Doctor Esposito Receives SMA Award

Albert C. Esposito, M.D., whose contributions to the concept and the reality of the Marshall University School of Medicine have spanned four decades, is the 1988 recipient of the Southern Medical Association's Distinguished Service Award.

The award was presented November 8 during the Association's Annual Scientific Assembly in New Orleans.

SMA President J. Lee Dockery said Doctor Esposito was the selection committee's unanimous choice for the award. "It is an honor for me to have the opportunity to recognize a physician who has made outstanding achievements and contributions to the field of medicine and the Southern Medical Association," he said.

During his career, Doctor Esposito has served as WVSMA President (1964–65) and President of the Southern Medical Association, the American Association of Ophthalmology, the West Virginia Academy of Ophthalmology, and the Cabell County Medical Society. He also served as a WVSMA Delegate and Alternate Delegate from West Virginia to the American Medical Association.

In addition, Doctor Esposito was a two-term member of the West Virginia Legislature's House of Delegates.

Other Honors

He is a member of the medical honorary society Alpha Omega Alpha, and received that group's Honor Award in 1976. He was named "outstanding ophthalmologist in the South" in 1972 and received the American Academy of Ophthalmology Honor Award in 1978.

Doctor Esposito's significant efforts, beginning in the 1950s, to bring a medical school to Huntington have led many to call him the "Father of the Marshall University School of Medicine."

In recognition of those efforts, he received an honorary Doctor of Science degree from Marshall in 1972 and was named a lifetime member of the School of Medicine's Cabell County Medical Association established the Albert C. Esposito Lectureship in his honor, and commissioned a portrait of him which hangs in the school's Medical Education Building.

Doctor Esposito continues to contribute his time to the school of Medicine as a professor of surgery on the school's volunteer faculty.

Morgan WVU's Most Loyal Mountaineer

David Z. Morgan, M.D., was chosen as the 1988 Most Loyal Mountaineer by the WVU Foundation, Student Foundation Board of Managers and the Mountaineer Week Steering Committee.

A graduate of West Virginia University, Doctor Morgan has served this institution, the School of Medicine, and the state of West Virginia in many ways. Serving for many years as Associate Dean for Student Affairs, he influenced the careers and lives of generations of physicians. For a number of years, he was the WVU Medical Alumni Association's Secretary-Treasurer.

He has been active in the state medical community in many ways, most recently as WVSMA President (1985-86).

Doctor Morgan's service reaches not only throughout the state medical community, but to all the people of West Virginia. Through a weekly newspaper column, he provides guidance with respect to common medical concerns and questions.

The award was presented during half-time ceremonies at the WVU-Penn State game.

Psychiatric Award

Frank J. Ayd, Jr., M.D., Emeritus Director of Professional Education and Research at Taylor Manor Hospital, Ellicott City, Maryland, and Clinical Professor of Psychiatry, West Virginia University Health Sciences Center-Charleston, was presented the "Open Mind Award in Psychiatry" by Her Majesty Queen Fabiola of Belgium in October.

Poetry Corner

Sister Benzo

I met her in the clinic
and worked with her for months
she was a plain woman with a chief complaint
of pacing and a history of mania and maybe drinking
She did poorly and when
my usual methods weren't working she
said I want diazepam and I said
no way but I wondered she is chronic
Eventually she was re-admitted
I don't remember why but I remember
how she was when she returned to me wearing a blonde wig
a black-and-purple sweat suit and funky boots and laughing
and brandishing a bottle of lorazepam
that read One Milligram Three Times A Day As Needed
which she needed every time and I asked her how long
would you intend to take this medication and she said
as long as I can oooooh Sister Benzo

Charles R. Joy, M.D.
Erie, Pennsylvania

Time's Measure

Time has nothing to do with clocks;
It is in one's mind that time resides.
Time can lumber away like an ox,
Or be as swift as the Valkyrie rides.
You watch the minutes, the hours, and then
Time is gone. As you rant and rave your
Clock throws his hands up at two and ten,
In no way responsible for time's behavior.
Wastrels we are when it come to time;
Sun and moon may come and go
With no more done than a paltry rhyme;
Yet great thoughts take only moments or so.
Then the ticking clock is left behind,
Oblivious to giant leaps of mind.

Robert L. Smith, M.D.
Morgantown

Continuing Education Programs

Here are the continuing medical education activities listed primarily by the Marshall University and West Virginia University Schools of Medicine and Charleston Area Medical Center / WVU Charleston Division for part of 1988. The programs were compiled by Ernest W. Chick, M. D., MU Director of Con-tinuing Medical Education; Patricia Penn, WVU Assistant to the Dean/Continuing Medical Education; J. Zeb Wright, Ph.D., Director of Continuing Education Outreach and Community Affairs, WVU Charleston Division; and Sharon Hall, Director of Continuing Education, Charleston Area Medical Center (also in charge of WVU Charleston Division on-campus CME). The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.)*

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the WVU Morgantown, Charleston and Wheeling campuses. Further information about CME activities may be obtained by calling Doctor Chick at (304) 696-7018; Penn (304) 293-3937; Wright, (304) 347-1243; and Hall, (304) 348-9580.

CAMC/West Virginia University, Charleston Division

Dec. 2, Transplant Update: Diabetes in Transplantation

Dec. 12, Oncology Guest Lecture: Rectal Carcinoma, Management

CME Outreach Programs

Key to Sponsors

★ WVU Medical Center, Morgantown

☐ WVU Medical Center-Charleston Division/CAMC

• CAMC/WVU-Charleston Division

(Check locally for additional information)

Beckley, ☐ Southern WV Clinic, 5:30 P.M.—Dec. 22 (vacation)

Brownsville, PA, ★ General Hospital, 11 A.M.—Dec. 1, Transient Ischemic Attacks—Medical vs. Surgical Treatment, Alzaro Gutierrez, M.D.

Cabin Creek, ☐ Medical Center, Dawes, 8:30 A.M.—Dec. 8, Pediatric Urology, James P. Tierney, D.O.

Fairmont, ★ Fairmont Clinic, 12:30 P.M.—Dec. 21, Handling of Nursing Home Patients, David Z. Morgan, M.D.

Fairmont, ★ General Hospital, 8:15 P.M.—Dec. (no program)

Gassaway, ☐ Braxton County Memorial Hospital, 7 P.M.—Dec. 7, Pediatric Cardiology at Primary Care Level, John Eckerd, M.D.

Grantsville, • Calhoun General Hospital, 11 A.M.—Dec. 12, TB in the 1980s, Elizabeth Funk, M.D.

Hurricane, • Putnam General Hospital, 8:30 A.M.—Dec. 15, Organ Donation and Kidney Transplantation, Ernest Hodge, M.D. (this program 7 A.M.)

Logan, • General Hospital, 11:30 A.M.—Dec. 16, Hypertension: Recognizing the Problem, Mary Lou Lewis, M.D.

Madison, ☐ Boone Memorial Hospital, 7 P.M.—Dec. 13, Special Problems in Geriatric Care, Shawn Chillag, M.D.

Man, • Appalachian Regional Hospital, 7 P.M.—Dec. 20, Update on Subdural Hematomas, John Schmidt, M.D.

Montgomery, • General Hospital, 12 P.M.—Dec. 7, Commonly Used Anesthetic Agents, J.K. Lilly, M.D.

New Martinsville, ★ Wetzel County Hospital, 12 P.M.—Dec. 8, Lyme Disease, Gregory Kujala, M.D.

Oak Hill, ☐ Plateau Medical Center Cafeteria, 7 P.M.—Dec. 8 (program tba)

Parkersburg, ★ Camden-Clark Hospital—Dec. (no program)

Ripley, • Jackson General Hospital, 12:30 P.M.—Dec. 9, Ultrasound, Howard Gordon, M.D.

So. Williamson, • Appalachian Regional Hospital, 5:30 P.M.—Dec. 15, Trauma Update, James Kessel, M.D., and Teresa Wagenknecht, R.N.

Spencer, • Roane General Hospital, 12:30 P.M.—Dec. 20, Hypertension, Asif Rahman, M.D.

Summersville, ☐ Memorial Hospital, 6:30 P.M.—Dec. 6, Update: Adjustive Disorders, Martin S. Kommor, M.D.

Waynesburg, PA, ★ Greene County Memorial Hospital, 7 P.M.—Dec. (no program)

Whitesville, ☐ Raleigh-Boone Medical Center, 11 A.M.—Dec. 20 (vacation)

White Sulphur Springs, ☐ Greenbrier Clinic Library, 4 P.M.—Dec. 20, Breast Cancer, Steven J. Jubelirer, M.D.

Williamson, ☐ Memorial Hospital Cafeteria, 6:30 P.M.—Dec. 1, Update: Use of the Laser in Surgery, Romeo Lim, M.D.

"THAT'S DOCTOR LAMONT . . . HE'S RETIRING NEXT MONTH, SO THEY'RE PHASING HIM OUT."

New Members

The following physicians were welcomed in October as new members of the West Virginia State Medical Association:

Kanawha

Stephen H. Bush, M.D., 830 Pennsylvania Avenue, Sulte 302, Charleston 25302

Robert C. Cochran, M.D., WVU Health Sciences Center, 3110 MacCorkle Avenue, SE, Charleston 25304

Thomas O. Dickie III, M.D., WVU Health Sciences Center, 3110 MacCorkle Avenue, SE, Charleston 25304

Carl Peter, M.D., 4605 MacCorkle Avenue, SW, Thomas Memorial Hospital, Emergency Medicine, South Charleston 25309

James Patrick Tierney, D.O., 3100 MacCorkle Avenue, SE, Suite 807, Charleston 25304

Mercer

Alan A. Rosenbloom, M.D., 1004 Heatherwood Road, Bluefield 24701

Assaad M. Mounzer, M.D., Sedgewood Townhouse No. 19, Bluefield, VA 24605

Daniel P. Nobel, M.D., 200 Upper Drive, Bluefield 24701

Monongalia

Anthony John Dominic, M.D., WVU Medical Center, Department of Radiology, Morgantown 26506

Walter Stephen Stalenski, M.D., WVU Medical Center, Department of Anesthesiology, Morgantown 26506

William Eugene Evans, Jr., M.D., WVU Medical Center, Department of Psychiatry, Morgantown 26506

Charles Richard Whiteman II, M.D., WVU Medical Center, Department of Emergency Medicine, Morgantown 26506

Raleigh

Porfirio A. Galapon, M.D., P. O. Box 1279, Shady Spring 25918

Residents

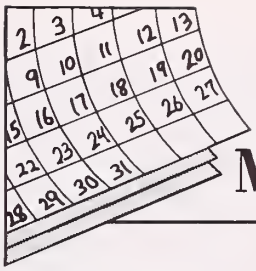
John Randolph Graham, M.D., 94 Westgate Drive, Apartment 201B, Wheeling 26003

Students

Eileen C. Turbessi, 565 Plymouth Avenue, Morgantown 26505

Mathew Gus Sokos, 260 Oakmont Road, Wheeling 26003

The West Virginia Medical Journal was host to the biennial conference of the State Medical Journal Advertising Bureau (SMJAB) in October at the Greenbrier. Some 23 state journals were represented. At coffee break above are, from left, Drs. Seebert J. Goldowsky, Editor-in-Chief, Rhode Island Medical Journal; Marion E. Alberts, Scientific Editor, Iowa; Medicine and Stephen D. Ward, Editor, West Virginia Medical Journal.



Medical Meetings

December

2-3—Advances & Controversies in the Treatment of Health Professionals (Medical Society of Va. Physicians' Health & Effectiveness Program), Williamsburg, Va.

2-4—WV Chapter AAFP Weekend & Sports Medicine Conference.

4-7—AMA Interim Meeting, Dallas.

1989

January

24-27—Southeastern Surgical Conference, Tarpon Springs, Fla.

27-29—22nd Mid-Winter Clinical Conference, Huntington.

February

5—Am. College of Medical Imaging, Los Angeles.

8-9—Fourth Annual Winter Conference, WV ACEP, Ohio ACEP, Canaan Valley.

9-14—Am. Academy of Orthopaedic Surgeons, Las Vegas.

24—Am. Academy of Allergy & Immunology, San Antoino, Tex.

March

19-23—Am. College of Cardiology, Anaheim, Calif.

19-24—Am. Assoc. of Immunologists, New Orleans.

23-26—Am. Medical Student Association, Las Vegas.

April

2-5—Am. Society of Abdominal Surgeons, Tampa, Fla.

13-16—Am. College of Physicians, San Francisco.

May

7-12—Am. Roentgen Ray Society, New Orleans.

17-19—Am. Trauma Society, Washington, DC.

For More Information . . .

Contact The Journal for additional information about most of the above meetings. Call (304) 925-0342.

The 22nd Mid-Winter Clinical Conference

WEST VIRGINIA STATE MEDICAL ASSOCIATION

Holiday Inn—Gateway
6007 Route 60 East—Exits #15 & 20 (I-64)
Huntington, WV

January 27-29, 1989

Program Outline

FRIDAY, JANUARY 27—Occupational/Industrial Medicine—2 to 5 P.M.

"Impact of Low Back Problems in Current Medical Practice."—Mario C. Battigelli, M.D., Morgantown; "Low Back Syndrome: Management, Interventions and Results."—Peter Curtis, M.D., Chapel Hill, NC; "A Practical Approach to Non-Surgical Treatment of Low Back Syndrome."—Sandy Burkart, Ph.D., Morgantown; "Occupational Trauma and the Medical Practitioner in West Virginia."—Thomas R. Bender, M.D., Morgantown; and "Noise-Induced Deafness: The Role of Practicing Physicians."—Gregory R. Wagner, M.D., Huntington.

SATURDAY, JANUARY 28—"Potpourri" of Topics—9 AM to Noon

"Sociopolitical Aspects of AIDS."—Elizabeth A. Funk, M.D., Charleston; "The AMA View of Resource Base Relative Value Study (RBRVS)."—James S. Todd, M.D., Chicago; and "Benefit Management Program—BC BS of WV."—Thomas S. Clark, M.D., Morgantown; and Janet Reed, Charleston.

SATURDAY, JANUARY 28—Surgery, A Changing Discipline—2 to 5 P.M.

"Reversal of Coronary Artery Disease: Fact or Fantasy."—Caldwell B. Esselstyn, Jr., M.D., Cleveland, OH; "Surgery, A Changing Discipline: Trauma."—James P. Boland, M.D., Charleston; and "Breast Masses."—Jane Kurucz, M.D., Huntington.

SUNDAY, JANUARY 29—Unstable Miocardium—9 A.M. to Noon

"Current Status of Coronary Angioplasty."—Stafford G. Warren, M.D., Charleston; "Thrombolytic Therapy."—Harold Selinger, M.D., Charleston; and "The Evolution of Coronary Artery Bypass Graft."—Ronald C. Hill, M.D., Morgantown.

REGISTRATION FEE—$75 for WVSMA members and $100 for non-members. Please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

OVERNIGHT ACCOMMODATIONS—Physicians should communicate directly with the Holiday Inn—Gateway. Attendees will be given a special room rate of $52 (single or double). When making reservations to obtain room accommodations, please specify that you're attending the WVSMA Conference.

ADVANCE REGISTRATION—Please complete the form below and mail to West Virginia State Medical Association, PO Box 4106, Charleston, WV 25364.

REGISTRATION MID-WINTER CLINICAL CONFERENCE JANUARY 27-29, 1989

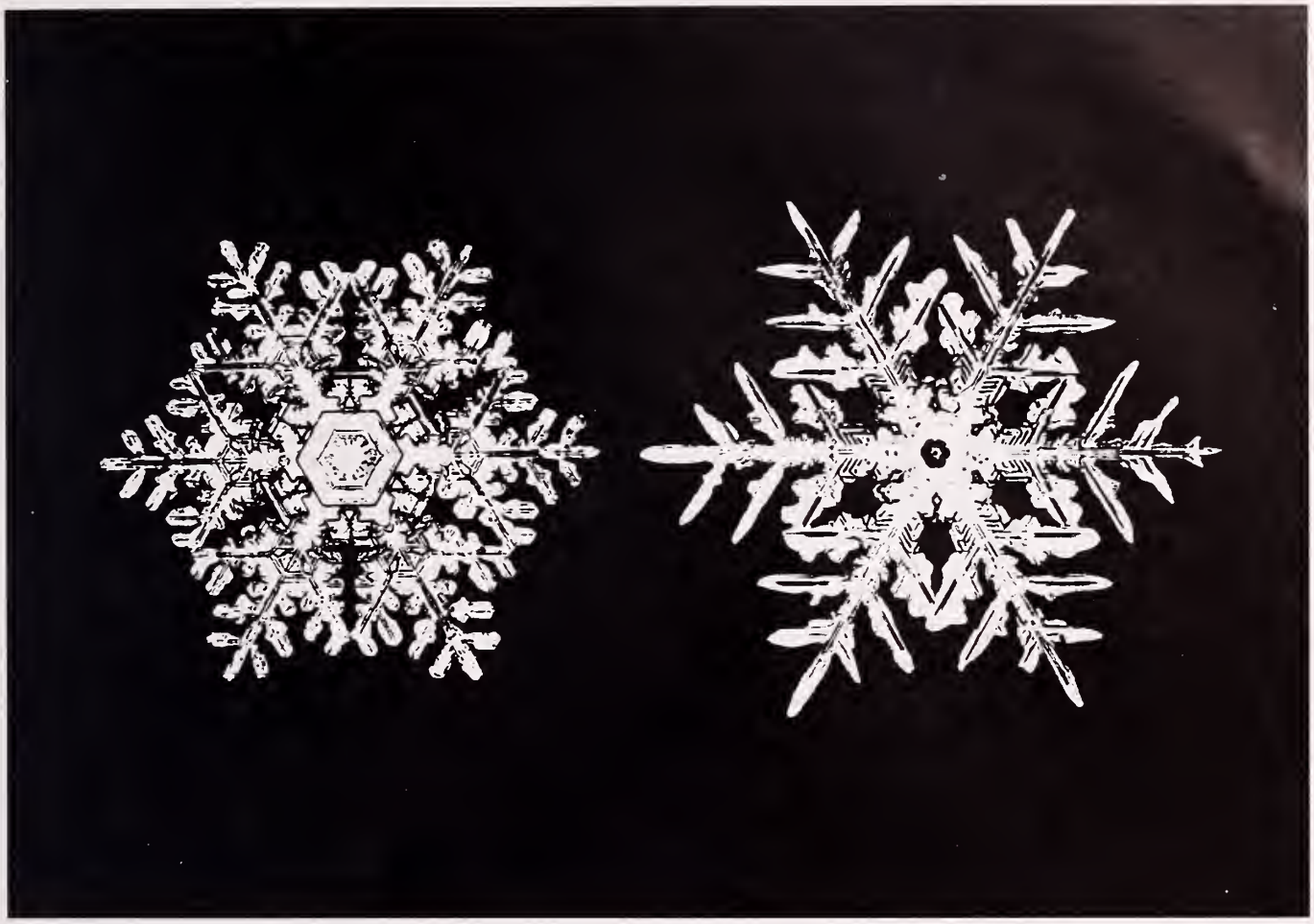
☐ Please register me for the 22nd Mid-Winter Clinical Conference January 27-29, 1989 at the Holiday Inn—Gateway in Huntington. My check payable to WVSMA for the $75 registration fee is attached.*

(Please mail check to WVSMA, PO Box 4106, Charleston, WV 25364)

NAME_____ SPECIALTY_____

ADDRESS_____

*There is no registration fee for residents, medical students and nurses. Registration fee for non-members of WVSMA is $100.



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Because body chemistry differs from person to person, we often need a choice of drugs to treat the same illness.

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To maintain the high standards of quality care, and because some drugs work better than others on different people, it is essential to have this diversity.

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Health Sciences Center News

West Virginia University

Compiled from material furnished by the Health Sciences Center News Service, Morgantown, W. VA.

TV Consultant, 'Why Did Johnny Kill?'

No one saw how troubled David Mancuso was until it was too late. By the time friends and relatives discovered the extent of his problem, an innocent teen-age girl had been fatally shot seven times in the chest.

Seventeen-year-old Mancuso of North Carolina developed a fatal attraction-type obsession for a classmate and is now serving a life sentence in prison plus three years for the second-degree murder of his fantasy lover.

Studying tragedies like this and tracing the cause of the problem in children who murder is the specialty of WVU adolescent psychiatrist Donald C. Fidler.

HBO Consultant

Doctor Fidler, Associate Professor of Behavioral Medicine and Psychiatry, recently served as consultant for a Home Box Office (HBO) documentary, "Why Did Johnny Kill?"

The 60-minute segment, part of HBO's Emmy award-winning "America Undercover" series, was aired five times during September.

Doctor Fidler, a soft-spoken man who is now writing a murder mystery based on his professional experiences as a forensic psychiatrist in North Carolina from 1986 to 1987, testified on Mancuso's behalf at his trial in 1986.

"I think it's very important to have educational shows like this and get the message out to the public. It's very eye-opening to learn that anyone can turn out like these so-called beasts if they live under similar circumstances," said Doctor Fidler, 40, of Morgantown.

In the HBO documentary, Mancuso's story is one of three case studies of children who murder.

Speaking from his Chestnut Ridge Hospital office stacked with videos and television equipment, Doctor Fidler, who serves as Chairman of the Video Committee of the American Psychiatric Association, talked about his personal experience with Mancuso.

Doctor Fidler said Mancuso suffered from an erotomania, an atypical psychosis—the same type of obsession that John Hinckley, Jr., had for Jodie Foster and which sparked his 1981 attempted assassination of President Reagan.

Doctor Fidler said that Mancuso, his family, and lawyers agreed to publicity about the case in the hope that other people could prevent similar tragedies by seeking professional help.

Birth Scoring System Successful

Hospitals throughout West Virginia are cooperating with the WVU Health Sciences Center and the state Department of Health in a program to reduce the high rate of infant death in the state.

The program, which uses a Birth Scoring System adapted from a successful British project, appears to be showing some success.

The Birth Scoring System, used in West Virginia since 1985, is the only statewide scoring system of its kind used in the nation. The system was federally funded from 1984 to 1988 and is now being funded by the West Virginia State Department of Health.

The Birth Score is now done on 90 per cent of newborns throughout West Virginia and determines risk of death between one month and one year of age.

West Virginia infants are scored on risk factors such as age of the mother, number of previous pregnancies and the birth weight of the baby. If the score is in the top 15 percentiles, the infant is considered "high score" and is linked with a physician for close follow-up.

"We want to be sure that these high-score infants are growing well and that they are closely screened for health problems," said David Z. Myerberg, WVU Associate Professor of Pediatrics and Director of the program. "By early detection and prompt treatment of health problems, we hope to prevent more serious problems and, in some cases, death."

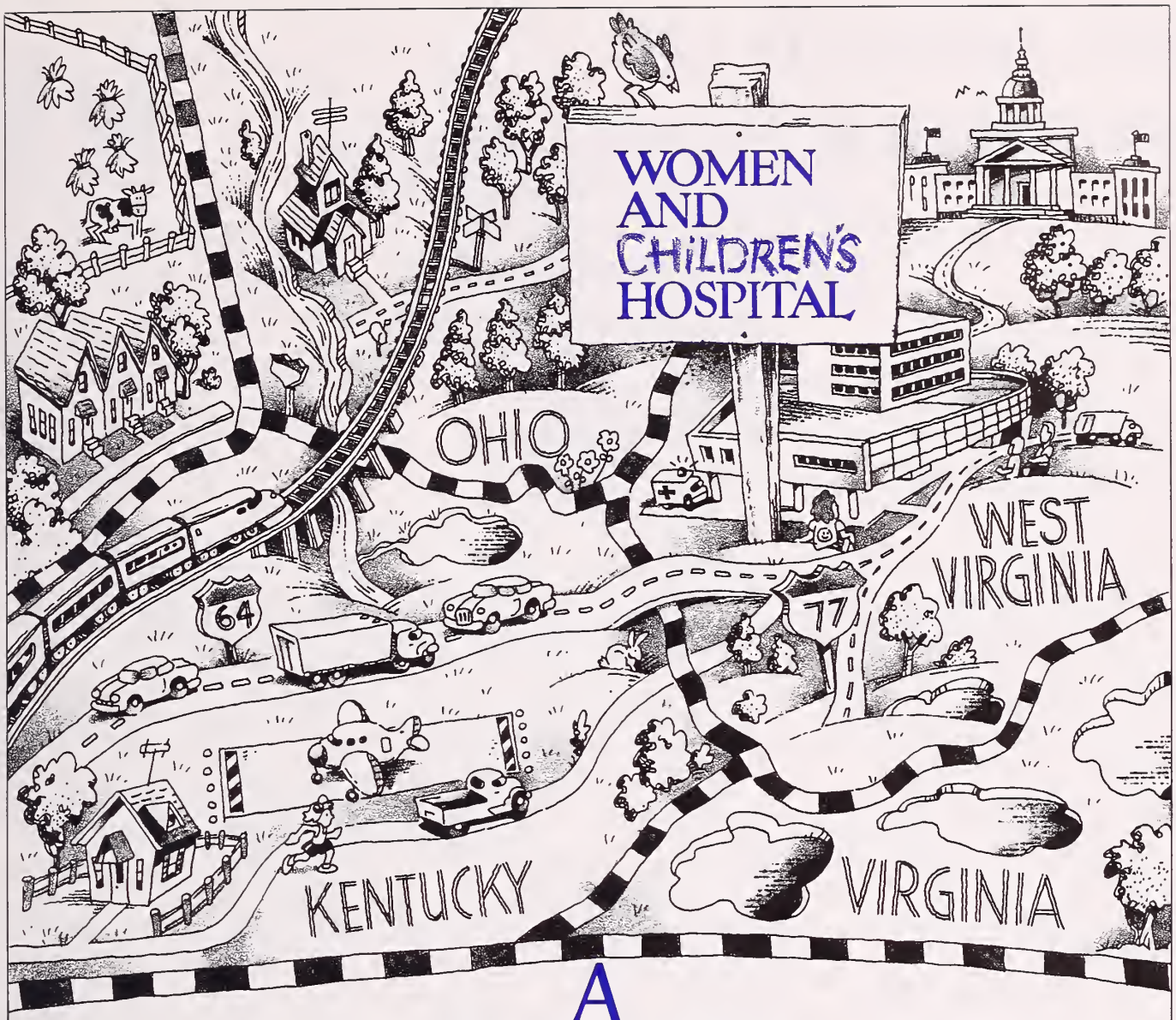
According to statistics gathered during the past four years, high-score infants have seven times the chance of dying between one and 12 months of age than low-score infants.

15-Per Cent Decline

"The rate of post-neonatal mortality for the period from 1980 to 1984 was four deaths per 1,000 live births. The rate dropped to 3.4 deaths per 1,000 live births from 1985 to 1987. This represents a 15-per cent decline in post-neonatal mortality since the Birth Scoring System was implemented," said Chuck Bailey, Acting State Health Department Registrar.

According to Cynthia Myerberg, R.N., Manager of the Birth Scoring System, numerous hospitals and state agencies have played a cooperative role in getting the project started.

"Nurses and station clerks have taken time from their busy schedules to score infants, talk with parents to explain the significance of the score, and recommend extra health care for the high-score infants," she said. "Physicians have taken on additional responsibilities with these infants because they require more time and closer scrutiny."



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MU School Of Medicine News

Compiled from material furnished by the Office of University Relations, Marshall University.

New Pediatrics Chairman Named

Joseph W. Werthammer, M.D., of Huntington is the new Chairman of the MU Department of Pediatrics, Dean Lester R. Bryant has announced.

Doctor Werthammer is the founder of Pediatrics Inc. and Director of the Newborn Intensive Care Unit at Cabell Huntington Hospital. He is no stranger to the School of Medicine, having served 10 years on its part-time and volunteer faculties.

"Doctor Werthammer has played a very important role in pediatrics in our community," Doctor Bryant said. "His success in developing the Newborn Intensive Care Unit has proven his ability to recognize a need, put together the resources and people to meet that need, and develop a thriving component of pediatrics in this community.

"He is an enthusiastic, energetic physician who has shown a great commitment to our region," he added. "His knowledge of medicine, his ability to teach students and residents, and his leadership qualities will, I think, remarkably strengthen our educational program in pediatrics."

Doctor Werthammer, who is board-certified both in pediatrics and the specialty of newborn medical care, will continue to maintain a part-time role in the private sector.

A native of Huntington, he received his bachelor's degree from Marshall and his M.D. degree from West Virginia University. He served his internship and residency at the University of California San Diego, where he was Chief Resident in Pediatrics during his final year.

He also spent two years at Harvard Medical School as a research fellow in neonatology.

He is President of the West Virginia Chapter of the American Academy of Pediatrics, Treasurer of the Cabell County Medical Society, and a Fellow of the American Academy of Pediatrics.

MU Medical High In FP Graduates

A national study shows that MU School of Medicine was 28 per cent above the national average in the number of graduates entering family practice residencies in 1987.

The study published in the journal, *Family Medicine,* showed that 15.4 per cent of Marshall's 1987 medical graduates, compared to 12 per cent nationwide, entered family practice residencies. The study was prepared by Gordon Schmittling of the American Academy of Family Physicians.

"Because we put such a high value on preparing students for careers in primary care, we're especially delighted to see these numbers," said School of Medicine Dean Lester R. Bryant. "Of course, family practice is just one of the primary-care specialties—overall, about two thirds of our graduates enter these fields, which include general internal medicine, pediatrics, and obstetrics and gynecology.

"We've been extremely pleased over the years with the feedback we get from directors of the residency training programs our graduates enter," he added. "Whether they enter these important primary-care fields or highly competitive subspecialties, residency directors have ranked them very high in their training programs."

A review of Schmittling's previous studies shows that the percentage of Marshall medical graduates entering family practice residencies has been above the national average for six consecutive years, and was more than twice the national average in 1985 and 1986.

Dr. Walden in New Associate Dean Post

John B. Walden, M.D., has become Associate Dean for Medical School Development, Dean Lester R. Bryant has announced.

Doctor Bryant said the position is a new one designed to expand the outreach programs of the school in several ways.

"Doctor Walden will be in charge of developing or expanding outreach programs that have a long-term effect on health care for West Virginians, as well as immediate results," Bryant said. "He'll be working to identify and counsel the high school students who will be our physicians of the future, to give medical students more opportunities to learn in rural settings, and to take more medical specialty services to people in rural areas.

"Because of Doctor Walden's strong background in providing rural health care, there is no one better qualified to lead these programs," he added.

Doctor Walden has been Associate Chairman of the Department of Family and Community Health since 1987. He will continue many of his responsibilities in that department, such as caring for patients and serving as Director of the Family Practice residency training program and the International Health program.

A third-generation family physician from rural Lincoln County, he took his undergraduate degree at the University of Virginia and received his M.D. from the West Virginia University School of Medicine.

Following an internship at the U.S. Public Health Hospital in the Canal Zone, he studied clinical tropical medicine at Gorgas Memorial Laboratory in Panama, the Walter Reed Army Institute of Research, and the Liverpool School of Tropical Medicine and Hygiene in England.

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Obituaries

CLAUDE S. LAWSON, JR., M.D.

Dr. Claude S. Lawson, Jr., of New Port Ritchey, Florida, formerly of Fairmont, died October 16 at his home. He was 71.

Doctor Lawson, a surgeon, practiced in Fairmont until his retirement. He was born in Boothsville (Marion County).

He was graduated from Fairmont State College, and received his M.D. degree in 1942 from the Medical College of Virginia.

Doctor Lawson completed his internship and residency at the Medical College of Virginia Hospitals, and additional graduate work at Catawba Hospital in North Carolina and Veterans Administration Hospital in Richmond, Virginia.

A World War II Army veteran, he was a Fellow of the American College of Surgeons and an honorary member of the Marion County Medical Society, West Virginia State Medical Association and American Medical Association.

Survivors include the wife, Mrs. Alice Baker Lawson; two sons, Claude S. Lawson III of Ravenswood and George L. Lawson of Harrisonburg, Virginia; one daughter, Mrs. William Zivic of Pittsburgh; one brother, William T. Lawson, M.D., of Fairmont, and two sisters, Mrs. James Conaway of Fairmont and Mrs. William Yanger of Pittsburgh.

EDWIN M. SHEPHERD, M.D.

Dr. Edwin M. Shepherd, one of the founding partners of the Charleston Eye and Ear Clinic, died October 24 in a Charleston hospital. He was 77.

Doctor Shepherd began his practice of ophthalmology in 1940 at Shepherd Hospital, which his father founded after moving to Charleston in 1917 as one of the area's first eye, ear, nose and throat specialists.

Doctor Shepherd was a partner in the clinic from 1967 to 1979, when he entered private practice in medical ophthalmology and allergy. He retired in 1986.

A native of Slab Fork (Raleigh County), Doctor Shepherd was graduated from Hampden-Sydney College, and received his M.D. degree in 1937 from Cornell University.

He interned at French Hospital, and completed his ophthalmology residency at Bellevue Hospital, both in New York City.

Doctor Shepherd, a colonel in the U.S. Army Medical Corps during World War II, wrote numerous papers and a book on both ophthalmology and allergy during his 46 years of practice.

He was Clinical Associate Professor of Ophthalmology for West Virginia University from 1981 to 1985.

Doctor Shepherd was a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons, American Academy of Ophthalmology and Otolaryngology, and American Academy of Otolaryngology Allergy.

He was a member of the American Academy of Environmental Medicine and Pan American Allergy Society, and an honorary member of Kanawha Medical Society, West Virginia State Medical Association and American Medical Association.

Surviving are the wife, Mrs. Ruth Shepherd; three daughters, Mrs. Lillian S. Scala of Charleston; Mrs. Ruth S. Vazquez, Knoxville, Tennessee, and Mrs. Lisa S. Klinker, San Diego; and two brothers, J. Banks Shepherd, M.D., and Walton S. Shepherd, both of Charleston.

Electromyography and Nerve Conduction Studies.

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County Societies

WESTERN

The Western Medical Society met October 11.

Ganpat G. Thakker, M.D., of Charleston was the guest speaker. His subject was "Hypertension." Hypertension was classified, and an in-depth analysis of drug pharmacology and interaction was given.—Aaron D. Cottle, M.D., Secretary.

PARKERSBURG ACADEMY

Drs. James Comerci and Derrick Latos, both of Wheeling, were guest speakers for the meeting of the Academy of Medicine of Parkersburg September 14. Their subject was "HMOs, PPOs and IPAs."

The Academy approved a contribution to the League of Women Voters, and a plaque of recognition of Elliott Thrasher, M.D., of Sistersville who has practiced there for 50 years.

Drs. John Bryce and Robert Crooks were recognized for 35 years of service to the medical profession.—Humberto Escandon, M.D., Secretary-Treasurer.

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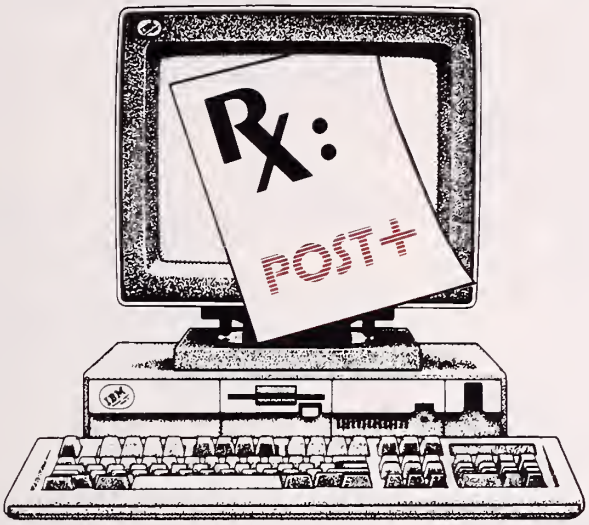

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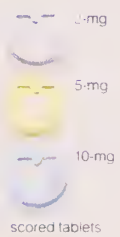

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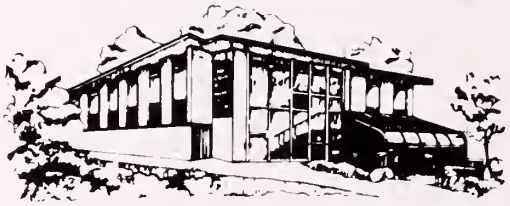

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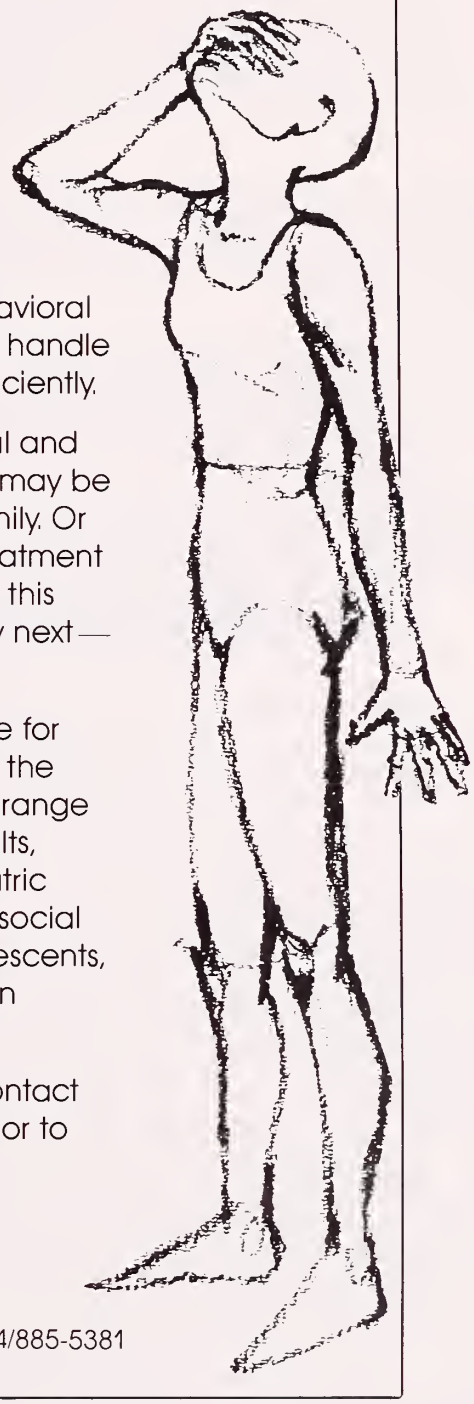

As a professional, you have experience in treating all kinds of emotional and behavioral problems. With your training and expertise, you handle the majority of your patients effectively and efficiently.

But occasionally there is one with whom normal and usual treatment has simply not succeeded. He may be monopolizing your time. Or fragmenting his family. Or he may be an impaired professional whose treatment is best conducted in a different setting. In short, this patient may have you at a loss as to what to try next—or where to turn.

Harding Hospital has been a welcome resource for mental health professionals for many years. For the difficult to treat patient, Harding offers a broad range of psychiatric services for adolescents and adults, including comprehensive medical and psychiatric evaluations, neuropsychological testing, family social workers and vocational rehabilitation. For adolescents, Harding conducts a full high school program on campus.

We can help with your hard to help patient. Contact Ray Dutton, Admissions Director, for information or to arrange for consultation and treatment.

Harding Hospital

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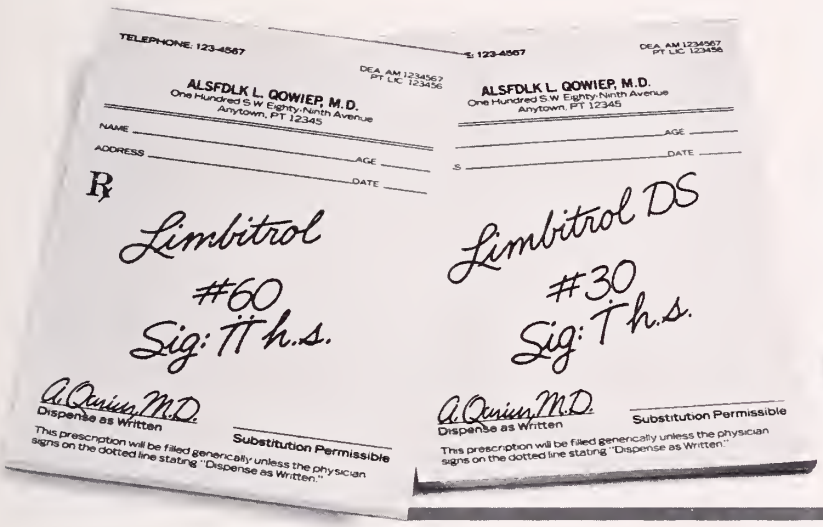
In moderate depression and anxiety

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week improvement in somatic symptoms[1]
- 50% greater improvement with Limbitrol in the first week than with amitriptyline alone[2]



Protect Your Prescribing Decision: Specify "Do not substitute."

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓥ

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓥ

References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Limbitrol® Ⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.**

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. *Psychiatric:* Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. *Neurologic:* Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. *Anticholinergic:* Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. *Allergic:* Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. *Hematologic:* Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. *Gastrointestinal:* Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. *Endocrine:* Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Other:* Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

Overdosage: Immediately hospitalize patient. Treat symptomatically and supportively. I.V. administration of 1 to 3 mg physostigmine salicylate may reverse symptoms of amitriptyline poisoning. See complete product information for manufestation and treatment.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

ROCHE®
ROCHE PRODUCTS INC.
Manati, Puerto Rico 00701

P.I. 0288

In the depressed and anxious patient

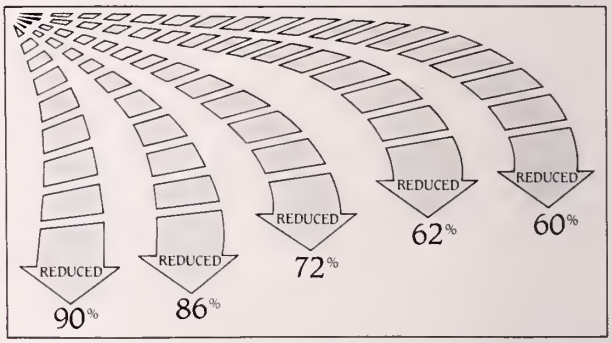
See Improvement In The First Week[1]...

And The Weeks That Follow

- 74% of patients experienced improved sleep after the first *h.s.* dose[1]
- First-week reduction in somatic symptoms[1]

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

Percentage of Reduction in Individual Somatic Symptoms During First Week of Limbitrol Therapy*



*Patients often presented with more than one somatic symptom.

Limbitrol®

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) (IV)

Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) (IV)

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